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The Satellite IoT Market : A Case of Dual Momentum

by Hub Urlings

The satellite Internet of Things (SatIoT) market is expected to continue evolving rapidly in 2025. Incumbent operators continue to dominate, holding roughly 80% of market share by serving large corporations across defense, logistics, maritime, utilities and energy. Meanwhile, new entrants remain an essential source of innovation, seeking low-cost, low-power solutions to serve new markets, but struggle to scale their operations.

image credit: iStock, ipopba

Despite the challenges faced by new entrants, growth prospects remain strong. Millions of active connections are already in place, and forecasts predict that adoption will accelerate through the next decade. This article examines the SatIoT market outlook, its role in the Fourth Industrial Revolution, sectoral adoption, competitive landscape, and the main topics shaping SatIoT's trajectory toward 2030.

Market Growth and Forecasts

Estimates differ widely depending on definitions and scope. ABI Research projects 7.5 million active SatIoT connections by mid-2025, rising above 10 million by year-end and reaching 13.6 million by 2030. Other analysts are even more bullish, suggesting figures closer to 40 million connections.

These numbers are hard to verify. Are they only L/S band systems, or do they also include VHF, Ku, and Ka? Are telemetry backhaul links considered SatIoT? Should ADS-B aviation tracking count? Regardless of methodology, one thing is clear: SatIoT is expanding, with market research figures triggering hundreds of millions of investment dollars flowing into new constellations and enabling technologies.

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EDITORIAL

September Satellite Events

There's an old song that says "I'll see you in September, when summer is gone..."

The month of September is traditionally when companies start to look ahead for the next year's plans and to help guide those companies as to where the industry is heading, there are several key industry events during the month such as the IBC in Amsterdam, World Satellite Business Week (WSBW) in Paris and the International Astronautical Congress (IAC) in Sydney, Australia, among others. Satellite Markets and Research will be at all three of these important events and will be covering the proceedings in a future issue and in our website www..satellitemarkets.com

Industry events are not just great opportunities for networking and conducting business but are an essential barometer of the current state and future prospects of the industry. At Satellite Markets and Research we aim to cover these important trends and opportunities through our various channels. The industry is constantly changing, sometimes at breakneck speed and we're here to help navigate through these challenging times. In this issue, we have articles that focus on the Internet of Things market, the changing broadcast market for satellites, optical communications and other key developments and trends in the industry. We like to think that we not only report *what happened* in the industry but *where the industry is heading*.

Enjoy the issue and see you in Amsterdam (IBC), Paris (WSBW) and IAC (Sydney).

Virgil Labrador

Editor-in-Chief

Satellite Executive BRIEFING
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EDITORIAL

Virgil Labrador
Editor-in-Chief
virgil@satellitemarkets.com

Peter I. Galace
Elisabeth Tweedie
Associate Editors

Contributing Editors:

North America:
Robert Bell,
Bruce Elbert,
Lou Zacharilla
Latin America:
Bernardo Schneiderman
Europe:
Omkar Nikam *(Strassbourg)*
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send an e-mail to:
info@satellitemarkets.com

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SYNTHESIS PUBLICATIONS LLC
1418 South Azusa Ave.
Suite # 4174
West Covina CA 91791 USA
Phone: +1-626-931-6395
E-mail:
info@satellitemarkets.com

Satellite IoT Market...
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"...ABI Research projects 7.5 million active Satellite IoT connections by mid-2025, rising above 10 million by year-end and reaching 13.6 million by 2030..."

Satellite IoT and the Fourth Industrial Revolution

The SatIoT market cannot be viewed in isolation. Its growth aligns with the broader Fourth Industrial Revolution (4IR), where sensors, edge computing, data analytics, automation, and ubiquitous connectivity are transforming industries.

Satellite IoT's role is pivotal: extending data capture and communication into areas terrestrial networks cannot reach.

Like the development of 4IR, satellite IoT follows distinct phases: starting around 30 years ago with the emergence of the first satellite IoT applications e.g. in the defence sector and maritime, and followed by an early adoption phase for large corporations in energy and utilities, from 2020 onwards we are in scaling up phase with arrival of the next generation satellite IoT operators, and progressing to an eagerly awaited maturity phase around 2030 with cross industry adaptation and SME mainstreaming.

The Satellite IoT Market Pyramid

To describe the dynamics in the satellite IoT market dynamics we use a Pyramid model. (see image of the Pyramid model on page 6).

In the model, we can identify several trends on both the demand and supply sides.

Let's start with the demand side.

Now in 2025, we see several established Market segments with strong growth:

- Defense & Security: Remote surveillance, asset tracking, border monitoring, and secure communications remain cornerstones. Goes through rapid growth at the moment.
- Transportation, Logistics and Automotive: Poised to become the largest segment by 2030, with applications in freight and container tracking, refrigerated cargo, and beyond-line-of-sight aircraft telemetry
- Maritime: Ship and cargo monitoring, offshore infrastructure connectivity, and climate data collection ensure maritime stays a top-three sector.
- Energy, Utilities & Mining: Real-time monitoring of pipelines, grids, rigs, and mines supports resilience and efficiency.

All existing segments show strong growth. Over the next decade, expanding demand is expected, particularly in the defence sector, as well as in transportation, automotive, logistics, and global supply chains.

The growth in these segments, however, cannot account for the full market size as forecasted by Market Analysts. For that, we need to examine emerging segments that will drive next-phase growth.

The real explosion in the coming 10 years is expected from new markets:

- Environmental Monitoring: Disaster response, flood and seismic monitoring, and air quality sensors are essential for climate adaptation strategies. By 2035, SatIoT will underpin global environmental data networks. Government investment in space and digital infrastructure is typically in two main sectors: defence and security, and environmental monitoring. Where the growth in the defence sector seems to be on a global scale, the approach to environmental monitoring differs. E.g. Where China is heavily investing in IoT-based environmental monitoring networks, in the US, it seems we see a retreat from the government in this sector. To get an idea of the scale, consider what the Chinese government is currently doing, such as initiating IoT environmental monitoring programs like their Blue Sky program for Air Quality.
- Agriculture: Low-cost and easy-to-deploy IoT farming tools for the hundreds of millions of small-scale farmers in low-coverage areas, to support yield growth and food security through precision farming and monitoring weather and soil conditions.
- Other Uses: A myriad of applications for SMEs and even personal off-grid IoT devices are expanding the ecosystem in new and innovative ways as soon as satellite IoT applications' costs are down.

Customer Adoption

In 2025, large corporations continue to dominate with a nearly 80% market share, adopting SatIoT for cost control, resilience, and global

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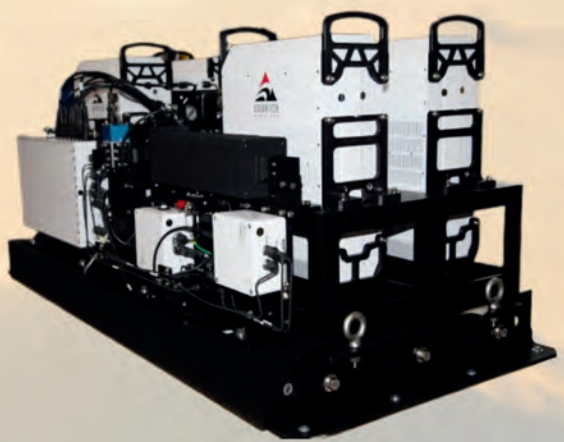

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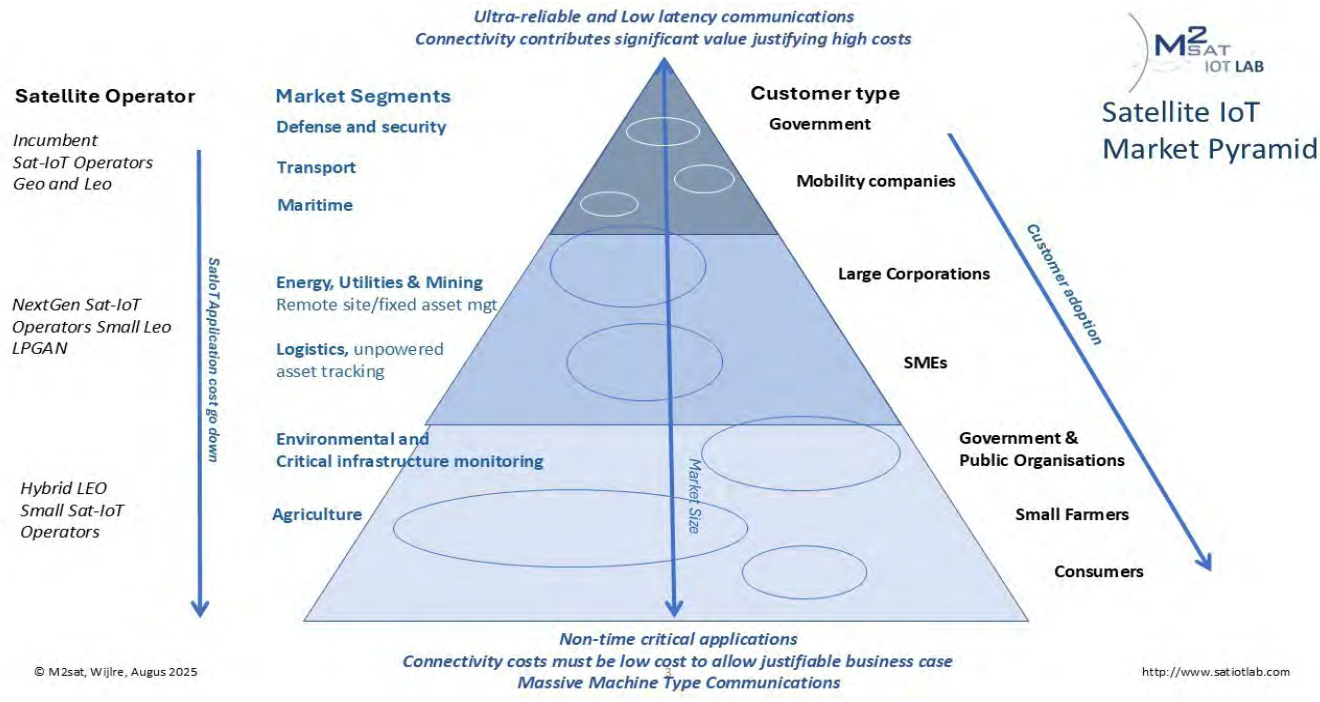


operations. Customer adoption is strongly related to company size, with Small and Medium Enterprises (SMEs) currently lagging behind due to the cost and complexity of satellite IoT applications. Falling device and connectivity prices, along with standardised plug-and-play services, are expected to unlock mass-market adoption by 2030.

By then, SatIoT will transition from a niche to a core Industry 4.0 infrastructure, functioning as the global 4IR "nervous system" alongside terrestrial networks.

The Operators

At the supply side of the satellite IoT market we see that incumbent operators like Inmarsat, Iridium, Orbcomm, Globalstar and Echostar have 80% market share.

These players leverage legacy infrastructure, with reliable satellite networks and services, global coverage, global landing rights and frequency rights, global distribution and support networks have strong client bases. They serve established markets like defence and security, maritime, transport and logistics and the utility and energy market, most of them in large corporations from the US that require reliable and stable connectivity. The high value of their SatIoT applications justifies premium pricing.

Over the last five years, a next generation of satellite operators has been under development, working with a variety of technical innovations. Currently, more than 45 satellite constellations are under development.

CubeSat-based operators like Astrocast, Kineis and Myriota in 2025 have (major parts of) their constellations in space, often using dedicated frequency bands. These Low Power Global Area Network operators have launched their commercial services and are looking to scale.

HySky is a promising piggyback system that provides Ku/Ka band-based services from GEO satellites, and later also from LEO. Lower Ku/Ka bandwidth prices, compared to the L/S band operators, allow them to provide a wider range of satellite IoT services including voice and mid-band (150 kbps) data services.

Another group of operators use a standards-based approach, the 3GPP Non Terrestrial Network (NTN) or satellite LoraWan, offering hybrid terrestrial/satellite services.

Satellite operators developing or deploying services based on 3GPP standards include Sateliot and Skylo, and also Iridium's Project Stardust and Eutelsat's IRIS² via OneWeb.

Other operators like Lacuna, Fossa, Echostar Mobile and Challenger 1 have a satellite LoRaWAN approach.

They all aim to bring direct-to-satellite connectivity to the mass mar-

ket—unlocking billions of potential devices. Dreams, sweet dreams.

Driving costs down is also the goal of picosat-based operators like Hydra Space, HelloSpace and Apogeo that are using VHF or UHF bands and the "free" (but contended) ISM band to provide their services. These system are still very much under development, and we have to see what service quality can be achieved in these bands, depending on the gods of interference.

An interesting approach also comes form Hubble Space, a system for tracking that works based on innovative Bluetooth connectivity to space.

We see a wide variety of next-gen operators that have one thing in common: their strategy centres driving down satellite IoT connectivity costs with easy to deploy end-to-end solutions with low-cost terminals, hybrid terrestrial / satellite networks. Their goal is making satellite IoT affordable and applicable for SMEs and consumers.

While the incumbent operators are growing their networks and customer base, and the LPGAN operators are looking to scale their commercial services, the supply side of the satellite IoT market is buzzing with dozens of next-gen operators each with their secret sauce using different orbits, satellite size, frequency bands and protocols. We will see in future how this works out.

The Scaling Phase of Satellite IoT

To get an idea of the dynamics in the next 5 years, we will have a look at some major issues the satellite IoT industry is facing.

"...We see a wide variety of next-gen operators that have one thing in common: their strategy centres driving down satellite IoT connectivity costs with easy to deploy end-to-end solutions with low-cost terminals, hybrid terrestrial / satellite networks. Their goal is making satellite IoT affordable and applicable for SMEs and consumers..."

Costs

Falling hardware and connectivity costs due to technological advancements and hybrid network strategies will help to drive down the costs of satellite IoT.

Where the high value of satellite IoT application for existing market segments justifies the premium pricing from incumbent operators, affordability remains a barrier in new cost-sensitive markets like environmental monitoring and agriculture.

Connectivity is only a small part of the total cost for a customer: application development, including sensor choice, edge computing, application data processing and user interface, as well as installation and customer support, are the main cost elements. This means cost-effective application development of end-to-end solutions and easy-to-install equipment as the key to driving down costs.

Only then will the existing market segments extend to new governmental, corporate, SME and even consumer markets.

Distribution Networks

Where incumbent operators had years to develop their global sales and distribution network with sensor partners, system integrators and service providers, for the next-gen operators, this is a main challenge that is going to take time and effort.

Standardization

Proprietary protocols complicate interoperability of satellite IoT network, that leads to operator lock up. In a time where we see a whole range of different satellite IoT networks each having it's own pro's and con's for specific applications (or locations) this is not desirable as is can lead to sub-optimal network use.

Standardisation using terrestrial protocols is an effort to minimise this, but looking at the long life cycle of the incumbent (proprietary) IoT satellite constellations, we will be stuck with multiple protocols for the next decades. The use of Multi-IoT network devices, such as the M2sat IoT Communicator, is another way to address this issue.

Integration Complexity – SMEs face challenges in deploying Satellite IoT in their applications due to a lack of necessary technical expertise. It starts with the fact that they have to choose the proper satellite IoT network. Keep in mind, however, connectivity is only a small part of the full IoT solution. Knowledge of the fast-moving sensor, edge and data processing and UI industry (this is the 4IR!) is required to develop easy-to-use satellite IoT solutions.

Complexity, in particular, is a challenge for new players. Some operators, even from the latest generation, charge five-figure amounts for application and integration support, clearly targeting the corporate market only. However, incumbent satellite operators hold a strong position there and will defend it.

The establishment of a global ecosystem with system integrators and service providers is required, however, to create a breakthrough in the SME market.

Market Perception: Satellite IoT still carries the "too expensive, too complex" image, and the fact is that this is still true. Customer education is essential, not just to convince them via marketing that satellite IoT is simple and not expensive, but also to educate them on how to build end-to-end satellite IoT applications cost-effectively. M2sat IoT is doing that with its SatIoT application development program.

As part of the 4IR, satellite IoT applications are combining application knowledge with a whole set of sensor, connectivity and data processing technologies that so far are only dealt with in education silo's. As long as this is the case, the perception of being too expensive and too complex will remain.

Hub Urlings was one of the pioneers of Satellite M2M/IoT as Product Manager of Inmarsat-C at the famous KPN Station 12. This "small data" satellite service's success, global coverage, and reliability made Inm-C the service of choice for many applications: from sending messages to truck fleet management to pipeline monitoring and bringing back data from all types of sensors. Now, 25 years later, he is still involved in developing a new generation of Satellite-IoT applications. In 2022, he founded SatIoTlab.com as a research, education, and co-creation platform for global satellite IoT applications He . can be reached at: urlings@m2sat.com

Satellite: You Can't Beat the Experience

by Bruce Elbert

Pan American World Airways, or PanAm, pioneered global air travel, summing it up with their slogan, "*You Can't Beat the Experience.*" This is a double entendre that points to their special skills – PanAm was deeply established around the world as the most experienced international airline, the model for all the rest. And, their flights were usually blessed with highly qualified cockpit and cabin crew who literally had been everywhere. On my first trip to Hong Kong in 1974, their purser suggested that I have breakfast at the Peninsula Hotel in Kowloon. That was a wonderful dining experience that I will never forget.

Satellite communications has some similarities to airline operations. Of course, satellites travel in space and so they too must be kept separate and under control from an organization or organizations. If you take all the world's primary airlines you have a collection that is remarkably like what we have in our industry. In the end, we want to know that whoever is providing us with a flight has the experience and objectivity to do the job the best they can. This is like the satellite operator or network provider – do this right and have a loyal customer base.

But, business models are changing from confident profitability to something unpredictable. We only have to look at PanAm itself to see how uncompromising the business world can be. After consolidation and the selling off of routes to United and Delta Airlines, the last of their flights were shuttles between New York and Washington, D.C., hardly impressive for the former behemoth of global air travel. This is analogous to what is happening to Intelsat, the first global Geostationary satellite operator that will merge into its main competitor, SES. Inmarsat already joined Viasat, which itself only became a satellite operator in the last 15 years.

Experience then is valuable up to a certain point, but that point can surprise anyone who ignores what it means

to have it. According to Google AI, experience is "practical knowledge, skill or ability gained through direct observation or participation". I couldn't have said it better myself.

Consider the oldest organization that is truly American: the US Army, which celebrates 250 years in 2025. I have some Army experience myself, having served in the Signal Corps from 1965 to 1969 in my field of radio communications. We lacked any SatCom back in the late 60s so all of my equipment was on the ground where we could install and operate it ourselves. Still, we always got the job done in the difficult terrain of Vietnam's Central Highlands. Someone once said you need to know the secret handshake, or equivalently, to pay your dues. The expression I prefer is to have been there. School and research get you just so far but organizations need key staff with the experience on the job where it really matters. It's like an expert system that has instant recognition of issues and their solution. The interface to this expert system is not from Google or ChatGPT. You can't yell at your computer if it gives you a false response because a computer takes no ownership of results – it's still up to you to be the judge.

I suggested in a contribution to Satellite Markets that a future vision requires (1) seeing what's there, and (2) what's not. Who better to make the best satellite communications deal than someone who's been there before? One sad story relates to a satellite communications project started by a major US operator that could have involved China as well as several other East Asian countries. It failed due to inexperienced leadership who couldn't see what was right in front of them – a regional partner who offered to do a 50/50 joint venture! Having missed what was obvious to me, this innovative project met cancellation, but the program was eventually saved by a deep-pocketed group in the Middle East who saw opportunities in EMEA. Another example is in cutting-edge multi-beam DBS using digital technology. Only because the contractor could demonstrate relevant expertise and substantial technical performance did the buyer commit to construction. Useful knowledge of the underlying physics and trust in interaction overcame rather uninformed direction.

Getting to a deal is tough because customers don't know what they want – the familiar IKIWISI (I'll know it when I see it). A design on paper cannot convince a skeptic, unless that customer wants to see their vision come to fruition. But paper has weaknesses best addressed with valid demonstrations and in the age of massive computer systems, simulations. I've talked in the past about the first generation of Iridium, built according to specifications that on the face were inconsistent with the objective of supporting a pocket-size handheld satphone that could make and receive calls in normal places with shadowing and even blockage from car frames and buildings. Instead, Iridium was known to work adequately for simple voice calls where the user is out in the open with a clear view of the sky. The phone itself was anything but pocket size and the voice quality did not meet standards set by the mobile phone industry. All of the simulations and tests verified that the design would fall short as a service to business travelers.

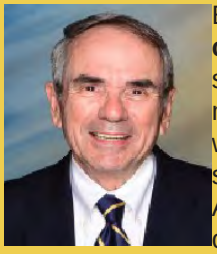
"... The World Wide Web in general and AI in particular put research in quantity at our disposal. It may be readable or interesting, but is it relevant?..."

Motorola created Iridium from the ground up, including a technology platform that was enviable for its day (but still not what the intended market expected). Their engineering team was top tier, and they oversaw a massive space and ground program. Much of the gateway equipment was purchased from existing suppliers and integrated with the help of US and European organizations. Today, ground segment leaders like ST Engineering iDirect, Comtech, Gilat and Hughes have their challenges since Starlink is vertically integrated. There also are several experienced technology suppliers of antennas, microwave components and baseband processors that when combined with the leaders are still important for "open systems" like GEO broadband and mobile, OneWeb and perhaps LightSpeed.

Motorola also met Iridium's L-band spectrum challenge with a high degree of support from the FCC at the World Radiocommunication Conferences in 1993 and 1995. But, Motorola was in and out of Iridium having spent more than US$ 4 billion with no significant return to investors; its reputation suffered as a result. Today, that sum would have amounted to something in the range of US$ 8 to US$ 12 billion, now seen as table stakes in the LEO broadband arena. What would you do with "just" one billion! You

better know the landscape of your segment of interest, and you better know what ingredients you require. I wrote abut this of this regarding the questions, who, what, where, when and how. Hard as it is, thorough research of these questions and adequate consideration of several compelling alternatives will map the course. Stepping back, system architecture is the approach where your look broadly across the alternatives using heuristics (engineering estimates) from qualified experts in the relevant fields. Independent work by MBA researchers won't get you very far since they are limited by their knowledge of the alternatives and their respective ingredients. But, they can help the experts compile and present the data for consideration.

The book, *Dangerous Company - The Consulting Powerhouses and the Businesses They Save and Ruin*, by James O'Shea and Charles Madigan, outlines how management consultants may not be reliable decision makers – precisely because they lack hands-on experience. One old hand said that newbies think that they will succeed because they are smarter and work harder. The World Wide Web in general and AI in particular put research in quantity at our disposal. It may be readable or interesting, but is it relevant? I use AI as a tool because it digs deep and remembers information that I might not. We must be the ultimate judge because only human intelligence can make that connection. In other words, you can't beat the experience!



Bruce Elbert is the Founder and President of **Application Technology Strategy LLC**.(www.application-strategy.com) He is a satellite industry expert, communications engineer, project leader and consultant with over 50 years experience in communications and space-based systems in the public and private sectors. Areas of expertise include space segment design and operation in all orbit domains, systems architecture and engineering, ground segment systems engineering, development and operation, overall system performance improvement, and organizational development. He can be reached at: bruce@applicationstrategy.com

Thomas Fröhlich, CEO- WORK Microwave

One of the most promising emerging technologies for satellite communications is optical or laser communications. The optical communications market is projected by market research firm Astute Analytics to reach US$ 6.7 Billion by 2033. To shed light on this market, Satellite Executive Briefing spoke with Thomas Fröhlich, CEO of WORK Microwave, one of the leading companies providing optical communication products.

Please give us a brief overview of your product and service offerings for the optical communications market?

WORK Microwave has started to develop the optical modem a few years ago as a derivative of our Wideband DVB-S2X Modem. Quickly, we have expanded the suite of products and built up an end-to-end solution for an entire Optical Ground Station (OGS), consisting of the telescope, optical bench, optical detector, modem, electro-optical converter, high power amplifier and beacon optics, and the associated OGS controller to orchestrate it all.

To our customers, we offer services ranging from site selection review and customized solution engineering to operational hand-over and training.

What are the key differentiators and benefits of your optical communication products?

No other OGS system provider today has the capability to offer the entire portfolio of opto-electronic devices we call the "comms package", which is essentially the complete signal chain that WORK Microwave has fully developed in-house. We have unique experience in integrating that with the opto-mechanical elements into a satellite communication system. I think today we have gained as well the largest experience of all competitors in designing and implementing a 24/7 operational OGS, practically a commercialization, not just for experimental setups.

Can you cite a case where your optical communications products were used to fulfill a customer's requirements?

Well, we cannot disclose too much but a very large governmental customer has entrusted us with the implementation of a turn-key OGS that has 24/7 operational constraints. In many other cases, we have provided and integrated comms packages with telescopes of various suppliers.

How do you see the market for your optical communication products going forward?

WORK Microwave is looking very positively ahead concerning optical communication. It is true that the technology must be considered still as very young, and it definitely needs to make its proof in systems that require a very high degree of availability and reliability. Most OGS solutions installed today are still rather of scientific usage and punctual operation, far from 24/7. But the technology has undisputed advantages in data rates, bandwidth and also security with respect to interception and jamming. Therefore, governmental applications are and will remain a key pilot user.

Anything else you would like to add?

I thank you for having given me this opportunity to present our company's solution and my personal thoughts. Our team will be delighted to answer requests for further information from any interested party. We will be also present at the IBC show at Amsterdam – come to our booth at Hall 1, booth # A44 and talk to us!

For more information on WORK Microwave's optical communciation solutions go to: www.work-microwave.com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Satellite Mediaport Services

Satellite Mediaport Services (SMS) is a full-service, state-of-the-art teleport located in Rugby, England. With exclusive, fully redundant network connectivity to multiple Points of Presence (PoP) in London and across the globe; SMS offers the optimal infrastructure for providing essential and reliable satellite communications services.

SMS's strategic position in England's industrial heartland, only a one-hour train ride from London, has made it a very attractive gateway option for Tier-one global network operators and for broadcast service operators alike. From its central location in the UK, the teleport has clear line-of-sight to over 120 communication satellites between 60^0E to 60^0W. Currently the teleport has over 80 antennas in a range of sizes in C-, Ku- and Ka-band with plenty of room to add more – including space for a cluster of antennas typically required for effective Non-Geostationary Orbit (NGSO) tracking.

"Our company has invested heavily in technology and our facilties in recent years. In fact the teleport has almost doubled in size in just the few years and is now 10 acres, with room for further expansion, " said Valentin Kislyakov, Gemernal Manager of SMS.

The teleport is ISO:27001:2002 certified and its core network comprises more than 10 Gbps of dedicated and fully redundant terrestrial fiber connectivity connects within 2 m/s with multiple major PoPs in the City of London and in Munich, Jerusalem, Singapore, .Washington, D.C., among others. The teleport's location, combined with extensive and growing infrastructure, has made it a very attractive option for Tier-one global networks, large Interenet Service Providers (ISPs) and broadcast customers.

Aside from reliable connectivity, the SMS teleport delivers relentless Quality of Servicew (QoS) combined with a highly responsive customer focus and accumulated know-how in service provisioning – all essential elements for an optimal base for satellite communication services over the European continent, throughout the Atlantic, African and over Asian regions. The SMS service offerings includes:

- Transmission and reception;
- RF uplink and downlink;
- IP connectivity and backhaul;
- Conception, installation and operation of VSAT networks

From its central location in the UK, SMS teleport has clear line-of-sight to over 120 communication satellites between 60^0E to 60^0W and within 2 m/s connection with multiple-peering points in London.

- One-way or two-way Internet backbone connectivity via satellite;
- Network/Hub Hosting;
- Hosting/Maintenance of Customer Furnished Equipment (CFE);
- Satellite capacity;
- Worldwide lease line connections;
- DVBS2 + SCPC services;
- Data Storage and backup; and
- Colocation.

In addition to the above services, SMS teleport is well-poised to provide gateway services to Low Earth Orbit (LEO) constellations and for accommodating cloud edge connectivity needs.

"There are really no limits to what applications we can support," said Kislyakov. The teleport currently supports applications including broadcast, content distribution, enterprise, VSAT services, gateway services and mobility such as maritime, among others. "We are ready to serve potential customers and meet their requirements," added Kislyakov.

For more information on SMS' services go to:
www.sms-teleport.com

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How the Right Components Can Make Your Space Mission More Sustainable

by Henry Hackford

It is widely publicized that the satellite market is seeing a move to smaller satellite design, driven by an increase in commercial and military spending on spacecraft. This shift in strategy, accompanied by an increased adoption of commercial off-the-shelf products (COTS), is currently propelling the space components market forward.

Components are integral to any satellite programme. Products such as servo drives and actuators enable precise and reliable movement for spacecraft and robotics and are essential for tasks such as satellite attitude control, solar array deployment, antenna pointing and mobility. These essential components are undergoing transformation through focused R&D programs, to make them more sustainable than they have ever been. Sustainability has become a critical consideration for the space sector as the industry strives to create space initiatives that use less resources and reduce damage both here on Earth and in space itself. In this article, we will explore how this is happening at the component level, but first let's investigate the trends that are shaping this surge in the space component sector.

Key Drivers for Sustainable Space Programs

There has been a wave in satellite programme activity driven by both the commercial and defence sectors. This investment is coming from larger companies and space agencies, but it is also being fuelled by private industry for a wide variety of applications. The issue of satellite sovereignty is also playing into the story, as countries realise that they need to develop more independence, in terms of satellite connectivity, due to the geopolitical instability that is currently sweeping the globe.

Mordor Intelligence estimates that the satellite parts and components market, estimated at US$ 272.6 billion will reach US$ 417.7 billion by 2030. This reflects a growth of 53.2% in the forecast period and there are some key factors driving this growth.

The satellite market itself has been undergoing a significant transformation. Satellites are getting smaller and the turnaround time in development and manufacturing has also significantly decreased. This is especially evident in the NewSpace sector, where innovation is rapid and operators are consistently bringing new technology to their satellites. The manufacturing process for these small satellites is very different to large, traditional GEO satellites which has always been a very risk averse part of the industry. Traditional manufacturers have long preferred to take the research and development of their components in-house as it gives them a high level of control.

The manufacturing process for small satellites is very different. Satellites are manufactured quickly, and operators are prepared to take more risks. Rather than take the proprietary approach as spacecraft manufacturers have done in the past, they are more willing to use COTS components to speed up the development process, ensuring that the spacecraft gets to orbit as soon as possible. Utilising space-proven COTS components with traceability means that they have trust in the systems and the parts are available within a certain timeframe, essential when they are running against the clock to launch.

The demand for lighter and highly reliable components is also increasing year on year. As space players try to lower costs without compromising on quality, they are looking to reduce weight so that launch costs can be lowered. It is important that they consider every component that is used, to make sure that it will make financial sense. In addition, it's also essential that every component is highly reliable. Once launched into space, there are currently no means of servicing the spacecraft, rover or probe. Everything must work perfectly for the entire lifetime of the system.

Meeting Demands

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Olsen designed and built an automated winch system technology demonstrator for a lunar rover project that uses radiation-hardened, space-rated components, able operate in the harsh lunar conditions, withstanding extreme temperature variations and high levels of radiation. (Image: Olsen Actuators)

Handing the responsibility for the design, development, manufacture and testing of components to a component company eliminates development costs for the operator and the manufacturer. It also means that experts in componentry are dedicated to R&D and are consistently enhancing the technology involved in these components to deliver a more efficient product which can help to contribute to the sustainability of a space program.

Utilising COTS Components

Taking a COTS approach eliminates the complexity and cost of development and testing in-house, with guaranteed performance and rapid lead times that speed up time to market. By leveraging the supply chain, as the defence sector has learned to do, commercial NewSpace companies are ensuring that they can maintain their chosen launch window, assuring that their mission will launch when they say it will. COTS manufacturers have already made the investment in R&D, integration, the clean room and project management. They have the engineering staff available. They offer quality in production and economies of scale, and many are already flight proven. Products undergo intensive testing for shock, vibration, cooling and radiation and other environmental testing. This may result in a more expensive cost per unit, but the development cycle is taken care of, and traceability can also be provided, if that is required for insurance purposes. As the industry moves towards more standardized and efficient production methods, COTS components are playing an increasingly important part.

Vigorous Validation Testing

Testing is critical to ensure the safety and reliability of any component that will be used in space. Many aspects of the components are put through their paces on specially designed test rigs that simulate the space environment. Using state-of-the-art measurement and control systems, the effects of extreme temperatures, vacuum environments, the stresses of launch and reentry are reproduced.

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Moving parts on satellites had previously been powered using hydraulic technology which uses fluid for power. However, though they are effective, hydraulic systems are heavy, dirty, maintenance-intensive, and reliant on highly toxic fluids. If these hydraulics can be replaced with electromechanical systems, there are big weight savings to be made, which is key for the next generation of satellites.

Electromechanical components that are lighter, cleaner and utilize less power as they only do so when they are active. They are also highly accurate and can offer an increased range of actuation. They are more resistant to temperature variations, which is an ideal quality given the huge fluctuations in temperature in the space environment.

Creating a More Sustainable Lunar Rover

At Olsen, we were recently involved in a lunar rover project with the University of Manchester and UK Space Agency. The project aim was to deliver a proof-of-concept demonstrator for a winch system that would be used by the lunar rover to lower a probe into lava tubes on the Moon and then retrieve it after data has been collected. This was a challenging brief because the winch system had to be able to withstand temperatures ranging from extreme lows of -100 degrees Celsius, right up to highs of 280 degrees Celsius. It also must be protected from ingress of lunar dust (regolith), which is highly abrasive so will damage components causing them to malfunction. Exposure to Cosmic radiation and solar particles can cause electrical systems to fail, so the components of the winch must also be radiation-hardened to withstand this radiation exposure. There are also high vacuum conditions on the lunar surface and within the lunar tubes, which makes the design and operation of the lunar rover extremely challenging. The system must be extremely lightweight, yet strong enough to support the rover's lowering into the lunar tubes, which could be 50m or greater descent. It's also critical that the motor can read the velocity of travel so that it can lower the probe at a uniform velocity of 0.5m/s, for maximum control, to enable scientific measurements during descent and to reduce the likelihood of damaging any part of the rover system.

The Olsen team designed and built an automated winch system technology demonstrator that uses radiation-hardened, space-rated components, able operate in the harsh lunar conditions, withstanding extreme temperature variations and high levels of radiation. To prevent harmful regolith from accessing the system, the motor is contained within a sealed 3D printed drum design. Weighing just 15kg, the winch system is lightweight, yet still strong enough to ensure success of the mission. Electromechanical components were used for the project which meant that the winch system was lighter, highly reliable, rigorously tested and was delivered within months.

Every Component Counts

Across the space industry, sustainability is becoming more important and discussed widely as a topic that must be addressed. Getting to space is expensive, dangerous and requires a huge amount of power and resources, so it's critical that the payload on any rocket is as lightweight as possible and that the life of the system that is launched is extended as long as possible. The component industry can play a valuable part in this sustainability effort. Through considered R&D efforts, the use of electromechanical systems rather than hydraulic ones, intense testing and validation and use of COTS products, space companies can lower their costs as well as make their mission more sustainable and environmentally friendly.

Henry Hackford is Business Development Director of Olsen Actuators and Drives. He has over 20 years of professional experience in the aerospace industry and is a Chartered Engineer with a Mechanical Engineering degree. Early in his career, he worked on aircraft from companies such as Airbus, Boeing, Bombardier, and Cessna. In recent years, Henry transitioned to the commercial side of engineering, where he excels in managing customer accounts, business units, generating new business, and nurturing relationships. He can be reached at:info@olsenactuators.com

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For more information go to: www.avltech.com

Es'hailSat Qatar Satellite Company

visit Es'hailSat at Hall 1, booth # 1.F68

Es'hailSat – The Qatar Satellite Company, incorporated in 2010, provides satellite, broadcast, teleport, and managed services. Es'hailSat is a private joint stock company wholly owned by the Qatar Investment Authority (QIA). Strategically located in Doha, Qatar, our coverage extends across the Middle East and North Africa, delivering critical communication solutions to broadcasters, telecommunications providers, enterprises, and government entities. Our satellites, Es'hail-1 and Es'hail-2, are co-located at the 25.5°/26°E orbital position, recognized as the prime TV broadcasting hotspot for the MENA region. Complementing this orbital infrastructure is our 50,000 sqm Tier-4 certified teleport facility, enabling the delivery of reliable, secure, and high-performance connectivity services.

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For more information, go to: **www.ndsatcom.com**

RF-Design

visit RF Design at Hall 1, booth # 1.F46

For over 25 years, RF-Design has been developing, producing and distributing technologically leading solutions for the ground segment of satellite communication systems. We offer a wide range of high-quality systems for RF distribution, RF-over-fiber transmission, signal amplification and RF monitoring. Many years of experience, technical know-how, a high degree of flexibility and the ability to customize products to meet individual customer requirements make RF-Design a globally valued partner in this demanding industry. A special focus is placed on a customer-oriented service approach that combines technical excellence with personal advice.

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PRODUCT SPOTLIGHT

Orbisat Defines a New Era of Space Domain Awareness

by Alvaro Sanchez

As the space domain evolves into a critical arena for both defense and commercial operations, Space Domain Awareness (SDA) has become a cornerstone of national security and satellite fleet management strategies. Known for delivering disruptive technical innovations in satellite communications, INTEGRASYS continues to strengthen global space resilience with its field-proven Orbisat platform, a groundbreaking solution that reshapes how space security and awareness are achieved.

Operationalizing SDA For Real-World Decision-Making

Orbisat addresses one of the most urgent challenges facing operators today: making sense of increasingly congested and contested orbits. With the exponential growth of satellite constellations and the rising threat of adversarial behavior in space, the need for real-time space awareness and predictive analytics has never been more vital.

Orbisat is a fully automated SDA platform designed to track, detect, and analyze satellite behaviors across LEO, MEO, GEO, and HEO. Built to support defense, intelligence, and commercial users alike, the system transforms orbital data into actionable intelligence, offering early warnings of potential collisions, anomalies, and hostile maneuvers. It enables operators to respond quickly, confidently, and decisively in increasingly dynamic orbital environments.

Unlike legacy tools that simply report space traffic, Orbisat is built to deliver mission-critical awareness, supporting real-time operations with intuitive interfaces and AI-enhanced modeling. This evolution from situational awareness to strategic foresight positions Orbisat as a pivotal enabler of space superiority; for example, if an object were approaching, the satellite would calculate and perform the necessary maneuver to avoid it while maintaining communication with the orchestrated ground network.

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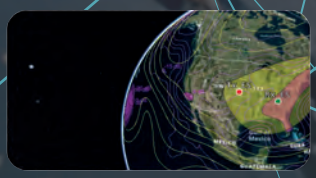
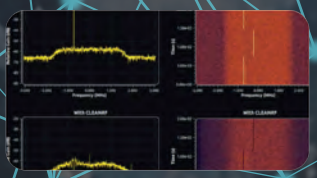

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Industry Recognition and Strategic Validation

This year, Orbisat received the BroadcastPro Manufacturer Award for Best Contribution to Sustainable Satellite Operations at the prestigious SATExpo 2025 in Dubai. The award highlighted its innovation, ease of integration, and immediate relevance to operational stakeholders, from military space forces to commercial satellite operators. This recognition underscores Orbisat's rising status as a trusted platform for space situational awareness in a period marked by orbital instability and risk escalation, offering a single pane of glass view that integrates multiple sensors—open-source and private, optical or RF, passive and active.

Enabling Multi-National Defense And Commercial Integration

INTEGRASYS has long been a strategic partner to defense ministries, space agencies, and major satellite operators. With Orbisat, the company continues to align its product development with the evolving needs of multi-domain operations and allied space strategies.

Orbisat's architecture supports seamless integration into defense command networks, joint space operations centers, and commercial mission planning platforms. It complements existing tools within NATO and allied DoD environments, and supports interoperability across coalition forces—enabling a shared understanding of the orbital environment and synchronized response capabilities.

Showcasing Orbisat Globally

Following its award-winning launch, Orbisat will be presented at several key international forums where SDA and space defense will be central topics:

- **Space ISAC VOSS VI** (Sept. 8-11, Colorado Springs, Colorado, USA) – Focused on space system resilience, this event will spotlight Orbisat's role in protecting critical orbital infrastructure.
- **9th EU SATCOM Market Event** – Telespazio (Sept. 9-10, Fucino, Italy) – European defense and space stakeholders will gain insights into Orbisat's role in secure SATCOM operations.
- **Air, Space & Cyber Conference** – (Sept. 22-24, National Harbor, Maryland, USA) – The largest U.S. defense-space event, where INTEGRASYS will highlight how Orbisat aligns with next-generation U.S. and NATO space strategies.
- **Defence in Space 2025** (Oct. 28-29, London, United Kingdom) - A leading international space-security forum, where INTEGRASYS will showcase how Orbisat enhances space domain awareness and multisensor interoperability in support of coalition and allied operations.

These events will allow global decision-makers and technical leaders an opportunity to explore how Orbisat supports sustained space operations, deterrence, and operational coordination.

Driving Strategic Awareness in a Critical Domain

As space continues to emerge as the new high ground for defense and global infrastructure, technologies like Orbisat are no longer optional—they are essential. Orbisat is designed for an era where satellite maneuvers can have strategic implications, where orbital resilience is paramount, and where rapid, accurate SDA is key to mission success.

With Orbisat, INTEGRASYS delivers a capability that bridges data, analysis, and operational action—ensuring space operators remain one step ahead in one of the most complex domains of modern conflict and cooperation.

Álvaro Sánchez, Marquis of Antella, is the CEO of INTEGRASYS. He is a Software and Industrial Engineer, with a Master's Degree in Business from ESIC Business School (Spain). He has worked at Integrasys since 2011, initially in engineering, then management and sales executive roles, where he was very successful in growing both revenue and profit, before becoming CEO in 2018. Before joining INTEGRASYS, he worked at CERN, the European Organization for Nuclear Research, as an RF Engineer responsible for measuring the timing for a Nanosecond Synchronization, used for measuring the Neutrino Speed. In 2021, Sánchez took on the role of Professor, teaching "Introduction to Business Management" for the AI degree at the IE University (Madrid), thus achieving his goal of helping others. In 2021, he was named by SSPI as one of the 20 under 35 Space Professionals. His current focus is on growing INTEGRASYS; developing new products, forging alliances with other defense and commercial organizations if appropriate, and partnering with MoDs and DoDs. He can be reached at: **alvaro.sanchez@integrasys-sa.com**

Reimagining Broadcast Infrastructure: The Enduring Role of Satellite in a Cloud-First Era

by Adir Hadad

In today's fast-moving media environment, where audiences expect instant, personalized content across platforms, satellite broadcasting may seem like the more traditional route. But while the tools and delivery formats have evolved, satellite hasn't lost its place. It has simply shifted roles.

For many broadcasters, satellite remains the most reliable and scalable way to deliver high-quality video to large audiences, particularly in regions where broadband infrastructure isn't yet robust. Across markets in Africa, the Middle East, Latin America, and even parts of Europe and Asia, satellite is still the only way to guarantee uninterrupted service. It provides reach, consistency, and uptime at a level that's hard to match.

In fact, for broadcasters entering new territories or working across fragmented infrastructures, satellite is often the first step. It gets the content out there securely, efficiently, and at scale.

But once that foundation is in place, the question becomes: how can broadcasters evolve further? That's where the cloud comes in.

The Rise of Cloud-Native Broadcasting

Broadcasters today are under pressure to be faster, more flexible, and more efficient. Content must move quickly across markets, adapt to new formats, and be ready for digital platforms alongside linear ones. Traditional workflows, based on physical hardware, static teams, and long lead times, are struggling to keep up.

Cloud-based broadcasting offers a way forward. It allows broadcasters to run operations from anywhere, scale without building new infrastructure, and test new services without the cost and complexity of legacy setups.

With cloud systems, a broadcaster can launch a new channel in days, not months. They can localize content for different regions, add dynamic ad insertion, and automate scheduling. Teams in different cities or countries can collaborate on the same platform. And when disaster strikes, whether technical or environmental, cloud systems provide built-in redundancy to keep services running.

Cloud-based BMS (Broadcast Management Systems) are also changing how programming is scheduled, planned, and managed. Teams can now update playlists, coordinate content, and manage compliance in real time across locations. Automation tools support not only technical workflows, but also creative ones, generating schedules, inserting promos, and assisting with compliance triggers and content replacement.

This operational agility is matched by a shift in how broadcasters engage with viewers. With cloud infrastructure, broadcasters can enable more interactive experiences, including smart overlays and scan-to-act features. A travel programme, for example, could display a QR code linking directly to curated itineraries or booking deals, bridging content and commerce in real time.

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It's also paving the way for new formats. Free Ad-Supported Streaming Television (FAST) is one of the fastest-growing trends in broadcasting. With low setup costs and minimal barriers to entry, FAST allows content owners to launch channels quickly, reach new audiences, and monetise through targeted advertising. While these services often begin online, many are now exploring satellite delivery to scale access.

The possibilities don't stop there. As cloud tools mature, broadcasters could use AI to personalise live linear feeds, spin up event-specific pop-up channels, or add smart overlays that turn passive viewing into interactive moments. With dynamic graphics and edge-powered content delivery, the future of cloud broadcasting is as creative as it is operational.

New AI-based tools such as iKOCLIPS are pushing this transformation even further—automatically generating short-form clips from long-form content in real time. This enables broadcasters to extend their programming across social platforms instantly, driving engagement, discoverability, and monetisation without manual intervention.

In short, cloud and emerging technologies aren't just improving back-end workflows; it's fundamentally transforming channel operations, enabling greater agility, coordination, and resilience across teams and systems. That shift also lays the groundwork for a more dynamic and personalised viewer experience, directly shaped by this new level of operational flexibility.

A Combined Approach That Works

Satellite and cloud each serve a different purpose, but together, they enable a more complete and flexible broadcast operation. Satellite provides the reach and reliability broadcasters depend on, especially in regions where IP networks are less consistent. Cloud brings the control, speed, and scalability needed to build modern workflows and meet changing audience demands.

Many broadcasters are already embracing this combined approach. They manage operations in the cloud, while using satellite to ensure consistent delivery to every screen. This isn't about replacement. It's about evolution.

It's about reach without compromise, quality without interruption, and revenue without boundaries.

"...Cloud-based broadcasting offers a way forward. It allows broadcasters to run operations from anywhere, scale without building new infrastructure, and test new services without the cost and complexity of legacy setups...."

The Road Ahead

The next phase of broadcasting will be defined by how well media organisations can adapt. Satellite is not outdated; it remains a fundamental part of a broader delivery ecosystem. Cloud is not a passing trend; it is the backbone of what comes next—whether that's FAST channels, AI-assisted scheduling, or real-time interactivity.

For those rooted in satellite, this is not a time to pull back. It's a time to build forward. By investing in cloud-first workflows while keeping satellite at the core of distribution, broadcasters can expand their reach, lower their barriers, and offer more engaging content experiences.

Full-solution partners like iKO Media Group are helping drive this transformation, bringing the best technology forward so broadcasters and content owners can deliver more—supported by smart infrastructure and designed for the audience expectations of tomorrow.

Adir Hadad is the VP of Cloud Services at iKO Media Group (iKOMG). For more information on iKOMG's cloud-based broadcast management and other services for the broadcast industry, go to:

www.ikomg.com

Platinum Equity to Aquire Anuvu

Platinum Equity announced that it has signed a definitive agreement to acquire Anuvu, a provider of global entertainment and high-speed connectivity solutions for airlines, VIP/VVIP aircraft, cruise lines and other mobility end-markets.

Headquartered in Lombard, IL, Anuvu serves more than 150 airline and 30 cruise-line customers worldwide. The company operates two primary divisions:

Media Technology Services: Licenses, distributes, localizes and delivers entertainment content for aviation, maritime and non-theatrical end markets, with a catalog of more than 400,000 titles.

Connectivity: Provides telecommunications equipment, broadband satellite Internet access, passenger management services, and analytics solutions to airline customers.

"Anuvu is a leader in delivering exceptional entertainment experiences to global aviation customers and has developed highly innovative and technologically advanced satellite connectivity and content delivery platforms," said Platinum Equity Co-President Jacob Kotzubei. "As passenger traffic continues to grow, we are encouraged to see carriers making substantial new investments in both connectivity and entertainment, improving passenger and guest experiences."

Platinum Equity has deep experience investing in technology and media businesses. Its current portfolio includes Deluxe, a leading provider of end-to-end post-production services for the world's leading content production studios.

"Anuvu's long-standing customer relationships, talented employees and global footprint provide a strong platform for organic growth," said Platinum Equity Managing Director Dan Krasner. "We also see opportunities to leverage Anuvu's content and technology capabilities to expand further into adjacent markets, including non-theatrical verticals, media processing and delivery, advertising and other custom services."

Financial terms were not disclosed. The acquisition is expected to close in the fourth quarter calendar year 2025, after the receipt of required regulatory approvals.

Drake Star is serving as the exclusive financial advisor to Anuvu.

Rocket Lab Closes Acquisition of Geost

Rocket Lab Corporation has completed the acquisition of the parent holding company of Geost, LLC, a developer of electro-optical and infrared (EO/IR) sensor systems for national security space missions, from Lightridge Solutions, a portfolio company of ATL Partners. The acquisition, first announced on May 27, 2025, was completed for US$ 275 million before closing adjustments, comprising approximately US$ 125 million in cash and 3,057,588 shares of Rocket Lab common stock, with an additional potential earnout of up to $50 million tied to future revenue targets of Geost's business.

Geost's EO/IR technologies support missile warning and tracking, tactical intelligence, surveillance, reconnaissance, Earth observation, and space domain awareness, core capabilities critical to U.S. space assets operating in increasingly contested environments.ce architecture envisioned under Golden Dome.

Geost will continue to operate in Arizona and Virginia, expanding Rocket Lab's footprint across North America. In acquiring Geost, Rocket Lab will gain the company's extensive product assets and manufacturing facilities and laboratories, intellectual property, and product inventory, according to the company.

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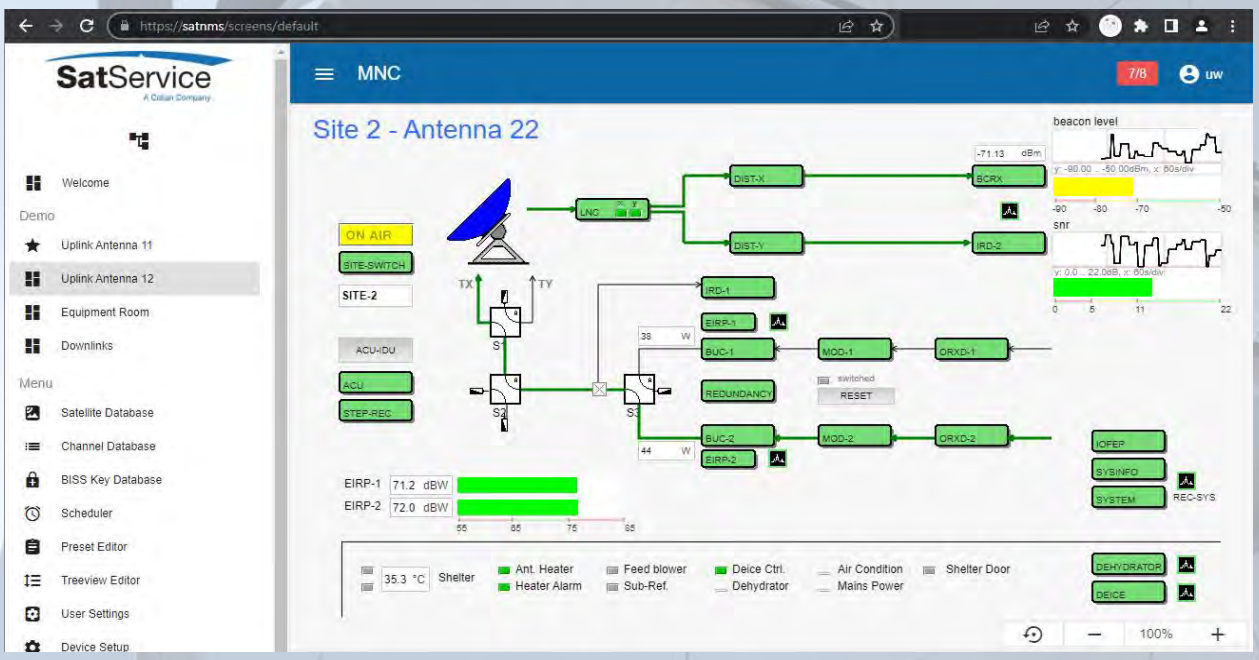

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Eric Labaye Appointed as Chairman of Eutelsat

Paris, August 4, 2025 – The Board of Directors of **Eutelsat** approved the co-optation of **Eric Labaye** as a Board member and his appointment as Chairman of Eutelsat Communications and Eutelsat SA on the occasion of the Board Meeting of 4th August 2025. He succeeds Dominique D'Hinnin who had announced his decision not to seek the renewal of his mandate on February 14th, 2025. Eric Labaye's appointment is effective on 4th August 2025.

At the same time, the Board of Directors approved other changes to the composition of the Board, notably the resignation of Michel Combes,

Eric Labaye

effective 3rd August 2025, and the co-optation of Lucia Sinapi-Thomas as an independent Board member. The Board also acknowledged the appointment of Guillemette Kreis (Agence des Participations de l'Etat - APE) as the representative of the French State.

Following these changes, Eutelsat Communications' Board of Directors will be composed of 10 members, of which 6 Independent Directors. It will include five women, equating to a representation of 50%.

The above changes take effect immediately. The incoming Chairman, Eric Labaye, will hold office until the next Shareholders General Meeting, where his appointment will be proposed for a full term.

Sunil Bharti Mittal, Vice-President and Co-Chair of the Board, said: "I want to thank Dominique D'Hinnin for his exemplary leadership of Eutelsat over the past eight years. Dominique oversaw the merger of Eutelsat and OneWeb that created Eutelsat Group as the first combined GEO/LEO satellite constellation, and ensured there is a European player at the forefront of satellite connectivity globally, including with the Iris² project.

Labaye has worked for over 30 years for international clients in the telecommunications, high-tech and industrial sectors, as well as governments and public institutions on a variety of strategic and operational issues. He is the president and co-founder of IDEL Partners, an advisory firm focusing on major development and transformation topics. He is also the chairman of the supervisory board of Ekimet

XTAR Appoints Pat Rayermann as CEO

Leesburg, VA., August 19, 2025 --XTAR, LLC, a U.S. affiliate of Hisdesat S.A. of Madrid announced that **Patrick H. Rayermann** has been appointed as its new Chief Executive Officer.

Rayermann will drive the organization

Patrick Rayermann

forward to its next phase of growth and transformation as a leader in military satellite communications (MILSATCOM) and Synthetic Aperture Radar (SAR) earth observation solutions used today by the US Department of Defense (DoD) and other members of the NATO Alliance according to the company.

Rayermann is a well-known and highly-regarded satellite communications professional with over 40 years of uniformed and industry experience supporting the Department of Defense. Following an Army career that included senior leadership roles at Defense Information Systems Agency, US Army Space and Missile Defense Command, and the Army Staff, as well as follow-on industry positions including with Airbus, Mr. Rayermann most recently served as a contractor within DoD-CIO.

Comtech Appoints Lloyd A. Sprung to its Board of Directors

Chandler, Ariz., August 18, 2025 –Comtech Telecommunications Corp. announced that its Board of Directors (the "Board") has appointed

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Lloyd A. Sprung

Lloyd A. Sprung as an independent director, effective August 18, 2025. Sprung possesses more than three decades of corporate finance and capital markets experience, having held senior executive roles at leading investment banks including Evercore and UBS. He is currently the managing member of LAS Advisors, an independent financial and strategic advisory firm.

"We are pleased to welcome Lloyd to the Board at this important time for our company," said Ken Traub, Chairman, President and CEO of Comtech. "With the improved operating performance that we announced in the third quarter together with the recent financing transactions, Comtech is stronger today and we believe Lloyd will bring a valuable perspective to the Board as we continue to execute on our operational, financial and strategic initiatives to enhance shareholder value."

"I am honored to be joining the Comtech Board," said Mr. Sprung. "I look forward to working alongside my fellow directors to support Comtech's management team and business plans going forward."

Sprung, 55, is the Managing Member of LAS Advisors, an independent financial and strategic advisory firm he founded in January 2024. He previously served as Managing Director at UBS from August 2017 to December 2023, during which he led the Restructuring and Private Debt Advisory practices. Prior to this, he served as Senior Managing Director at Evercore from April 2011 to May 2017, Managing Director at Miller Buckfire from 2001 to 2010 and previously Vice President at Merrill Lynch. Mr. Sprung obtained his Bachelor of Arts degree in Economics from the University of Pennsylvania and a Master of Business Administration as a Baker Scholar from Harvard Business School.

U.S. Electrodynamics Appoints Jeff LaMastus as Head of Commercial and Strategy

Brewster, Wash., August 18, 2025 —U.S. Electrodynamics, Inc. (USEI), a provider of satellite and terrestrial ground network services, today announced the appointment of **Jeff LaMastus** as Head of Commercial and Strategy.

LaMastus brings more than 30 years of experience in satellite communications, telecommunications, and global connectivity solutions. He has held senior leadership roles at PanAmSat and Intelsat and is widely recognized for his expertise in building high-value partnerships, launching new market offerings, and aligning business strategies with emerging technology trends.

Jeff LaMastus

In his role, LaMastus will lead USEI's global business development, strategic growth initiatives, and commercial partnerships, guiding the company's continued expansion in an evolving multi-orbit, multi-band communications landscape.

"Jeff's proven track record in driving commercial growth and his deep understanding of the global satellite communications market make him the ideal leader to advance USEI's commercial strategy," said Jim Veeder, CEO of USEI.

LaMastus's appointment supports USEI's mission to provide secure, resilient, and high-performance communications infrastructure for government, commercial, and enterprise customers worldwide. With teleports in Brewster, Washington, and Vernon Valley, New Jersey, as well as a growing network of international partnerships, USEI offers global coverage and end-to-end connectivity solutions for today's most demanding applicatio ns.

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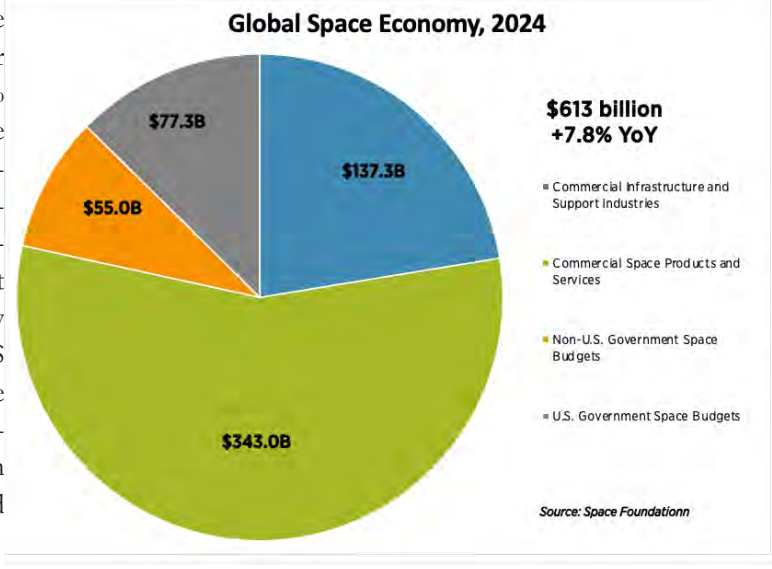
The Space Report 2025 Q2 Highlights
Record US$ 613 Bil. Global Space Economy

Colorado Springs, Colo., July 22, 2025—Space Foundation, a nonprofit organization founded in 1983 to advance the global space community, released The Space Report 2025 Q2, revealing the global space economy reached an unprecedented US$613 billion in 2024 — reflecting strong 7.8% year-over-year growth. The milestone underscores the vital role space plays in driving economic growth, ensuring national security, and enhancing public safety.

The report found the commercial sector accounted for 78% of the global space economy, with government budgets contributing the remaining 22%. Government space spending grew 6.7%, to reach US$ 132 billion, with the United States investing US$ 77 billion in national security and civil space programs.



"Space is not just a frontier for exploration; it is a cornerstone of our economy and security," said Space Foundation CEO Heather Pringle. "At Space Foundation's Innovate Space: Global Economic Summit, we will unveil key data and trends that propelled the global space economy to exceed US$ 600 billion for the first time in history. Alongside industry and economic experts in Washington, D.C., we will explore the significant impact of the commercial sector and analyze the effects of established and emerging markets."

Space Foundation projects the global space economy could cross the US $1 trillion mark as soon as 2032, driven by factors including the booming commercial market that is rapidly monetizing advancements in communications and earth observation satellites.

The Q2 edition also highlights the record pace of space launch in the first half of 2025, with a liftoff to orbit every 28 hours from Jan. 1 to June 30 — six hours faster than the annual record set in 2024. With 81 launches, SpaceX accounted for more than half of the world's 149 launches through June 30. With most launches carrying communications satellites to orbit, the satellite broadband sector showed robust growth, with SpaceX's Starlink gaining competition from constellations including Amazon's Kuiper and Eutelsat's OneWeb.

In another commercial sector poised for rapid growth, Earth-observation satellites are playing a crucial role in disaster response, enhancing predictive capabilities for natural disasters.

Additional factors driving space sector growth include efforts by nations around the world to develop sovereign military space capabilities. European and Asian countries have pledged to develop domestic military space programs amid regional conflicts and the growing need for independent launch capabilities.

U.S. military spending on space was poised for rapid growth, with increased spending on programs including the proposed Golden Dome missile shield. Signed into law on July 4, the One Big Beautiful Bill authorized a US$ 25 billion initial investment in the Golden Dome and allocated another US$ 500 million to improve military space launch infrastructure.

To view Innovate Space: Global Economic Summit event details and the full agenda, visit www.spacefoundation.org/innovate-space-global-economic-summit. Livestream available at www.linkedin.com/events/7343766843200782338.

To access The Space Report 2025 Q2, visit www.thespacereport.org

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MSSA Releases White Paper on Satellite Direct-to-Device Services

San Ramon, Calif. August 27, 2025 – The Mobile Satellite Services Association (MSSA) released a white paper on Spectrum Management Considerations for Direct-to-Device (D2D) Services, providing a resource for Mobile Network Operators (MNOs) seeking to expand coverage to effectively address underserved and unserved areas, particularly where terrestrial infrastructure deployment is economically unviable. The white paper highlights the advantages of Mobile Satellite Service (MSS) spectrum and how it can be used to efficiently deliver Direct-to-Device (D2D) satellite services and address coverage gaps for MNOs.

A Cost-Effective and Scalable Coverage Solution

Market momentum is building with global consumer D2D revenues projected to reach $36 billion by 2033. Against this backdrop, the MSSA white paper offers timely insights and guidance on how to advance resilient, interoperable D2D services that align with international regulatory and technical standards.

D2D satellite services provide MNOs with a practical and scalable way to expand their networks into coverage gaps, dead zones, and remote regions that lie beyond the reach of traditional cellular infrastructure. These underserved areas, especially those at the fringe of terrestrial coverage between semi-urban and rural zones, represent a significant business opportunity to drive traffic growth and improve Average Revenue Per User (ARPU). By enabling seamless service in these regions, MNOs can enhance customer experience, retention, and service quality.

"This paper lays the groundwork for how MNOs can harness direct-to-device satellite services to meet coverage obligations, unlock new service areas, and realize the promise of space-based communications without disrupting existing terrestrial networks," said Serge Legris, co-author of the white paper and Chief Technology Officer at MSSA member Terrestar. "It's not only about expanding coverage, but doing so in a way that's technically and economically sustainable, and aligns with regulatory and technological realities," he added.

Highlights

The paper delivers a strategic and technical roadmap of how D2D services can be deployed by MNOs using MSS spectrum. Key highlights include:

- **An assessment of MSS spectrum advantages** for D2D use cases, analyzing how MSS spectrum offers benefits of coverage enhancement without the risk of co-frequency interference with terrestrial networks, preserving the performance and integrity of existing cellular systems.
- **Technical and regulatory deployment insights**, including how MSS spectrum enables service across 100% of the outdoor area within a satellite's beam footprint (excluding only the densest urban areas) and largely avoids interference with terrestrial networks due to its dedicated use and international coordination.
- **Guidance on spectrum management and coexistence**, noting that reuse of MNO terrestrial spectrum is feasible in some remote areas, but it is important to consider the trade-offs, balancing coverage expansion with spectrum efficiency and service quality. MSS spectrum offers a reliable and interference-free foundation for D2D deployments, helping operators avoid operational complexity.

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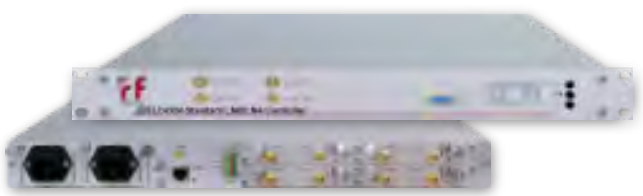

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