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Jajati Mohanty
CEO of Schiebel India

PG 22



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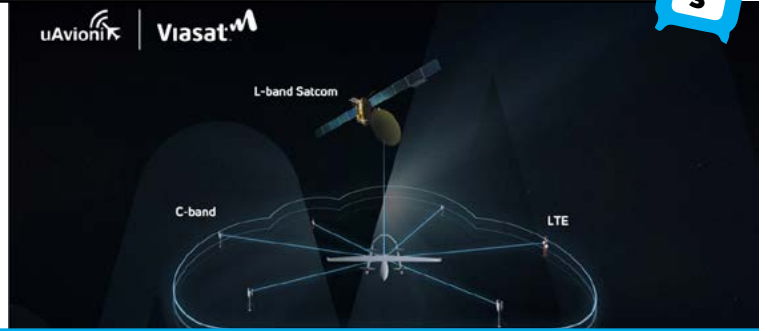
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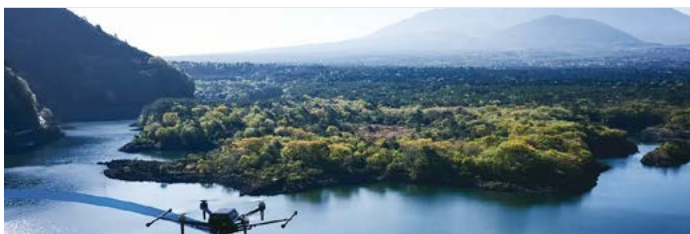
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B. KARTIKEYA

Hello my dear readers,

The monthly e-magazine Drones World documents the rapid expansion of the drone market by showcasing the most recent product introductions, evaluations, and UAV-focused initiatives. Current news on developments in the drone industry is given to our readers in the May 2024 issue.

Keep yourself occupied with the material in the BVLOS, GIS, Counter Drones, Defense, and other Magazine areas until our next issue arrives.

We brought you a special cover page interview with Mr. Jajati Mohanty, CEO of Schiebel India Says Schiebel India and local firm VEM Technologies have joined hands for the production of CAMCOPTER® S-100 in India wherein the complete assembly, integration and testing (licensed production) in now happening within the country at Hyderabad and in addition Schiebel India is also setting up an state of the art MRO facility to maintain these assets for the next 10-15 years as mandated by the Indian Navy.

Drones World Special Editor Sanjay Singh in Conversation with Mr. Dinesh Baluraj CEO - Yali Aerospace feels “the only problem they encounter is the regulatory framework for, BVLOS operation. DGCA has to establish the policy soon. Though they have 10 years of BVLOS drone operations in Australia, UK, and African and in European countries still they couldn’t conduct one for their people due to the delay of policy.”

Drones World Magazine helps link manufacturers, suppliers, component makers, technology providers, installers, purchasers, and consumers by reaching thousands of industry professionals across the commercial drone business.

For now, please sit back, relax, and glimpse the growth and evolution of the drone sector as we transport you over the world's sky. We welcome your comments, feedback and story ideas as we chart the on-going course of advancements in autonomy. I can be reached at dronesworldmag@gmail.com

Aloft Introduces Automated SGI Waivers in Aloft Air Control, Streamlining Access to Restricted Airspaces

Aloft Technologies, Inc. (Aloft), a leader in advanced drone software solutions, is thrilled to announce the integration of Automated Special Government Interest (SGI) Waivers into its Aloft Air Control platform. This new feature is set to revolutionize how drone operators access restricted airspaces, significantly enhancing operational efficiency and compliance with federal regulations.

Automated SGI waivers are available today for all Aloft Air Control enterprise customers.

The Automated SGI Waivers functionality simplifies the complex and time-consuming process of obtaining necessary permissions for drone operations in sensitive or restricted areas. This development reflects Aloft's ongoing commitment to innovation and its dedication to supporting the operational needs of its clients across various industries, including public safety, emergency response, and infrastructure inspection.

Jon Hegranes, CEO and Founder of Aloft, commented on the new feature, saying, "We understand the critical nature of time-sensitive



operations, especially in scenarios that involve public safety and emergency responses. Integrating Automated SGI Waivers into Aloft Air Control not only streamlines the approval process but ensures that our clients can deploy their drones quickly and legally, even in the most restricted airspaces. This capability is about empowering our users to focus more on their mission-critical tasks and less on bureaucratic hurdles."

The Automated SGI Waivers are designed to interact seamlessly with existing features within the Aloft Air Control ecosystem, providing a comprehensive solution for airspace management

that includes pre-flight planning, real-time traffic alerts, and post-operation analysis. This integration ensures a smooth, intuitive user experience and upholds the highest safety and compliance standards.

Key benefits of the Automated SGI Waivers include:

- Reduced Approval Times: Drastically cuts down the waiting period for gaining airspace access, facilitating rapid response and operational readiness.

- Enhanced Compliance: Ensures that all drone flights are compliant with current FAA regulations, minimizing legal risks and enhancing public safety.

- Streamlined Operations: Integrates with the overall flight management system to provide a unified workflow from planning to execution.

This innovative feature is expected to set a new benchmark for operational efficiency in drone technology, reflecting Aloft's role as a pioneer in the industry. With one click, users can transform an existing mission in Aloft into an auto-generated SGI form ready to email to the FAA's SOSC Office.

EVA AND RDMC ANNOUNCE THEIR PARTNERSHIP TO BUILD-UP THE CYBERSECURITY OF THE LOW ALTITUDE ECONOMY

EVA, a pioneering leader in the low altitude economy and its infrastructure, and RDMC, a leading cybersecurity firm, are pleased to announce their collaboration aimed at enhancing cybersecurity solutions for the low altitude economy.

As the world moves towards leveraging the low altitude economy for various applications, including urban air mobility and drone logistics, ensuring the safety and security of these operations becomes paramount. The partnership between EVA and RDMC signifies a concerted effort to address cybersecurity challenges specific to the low altitude airspace.

Olivier LE LANN, CEO of EVA, commented, "At EVA, we are committed to not only revolutionizing the way we use unmanned solutions for the low altitude but also ensuring the highest standards of safety and security. Our collaboration with RDMC marks a significant step towards fortifying the cybersecurity



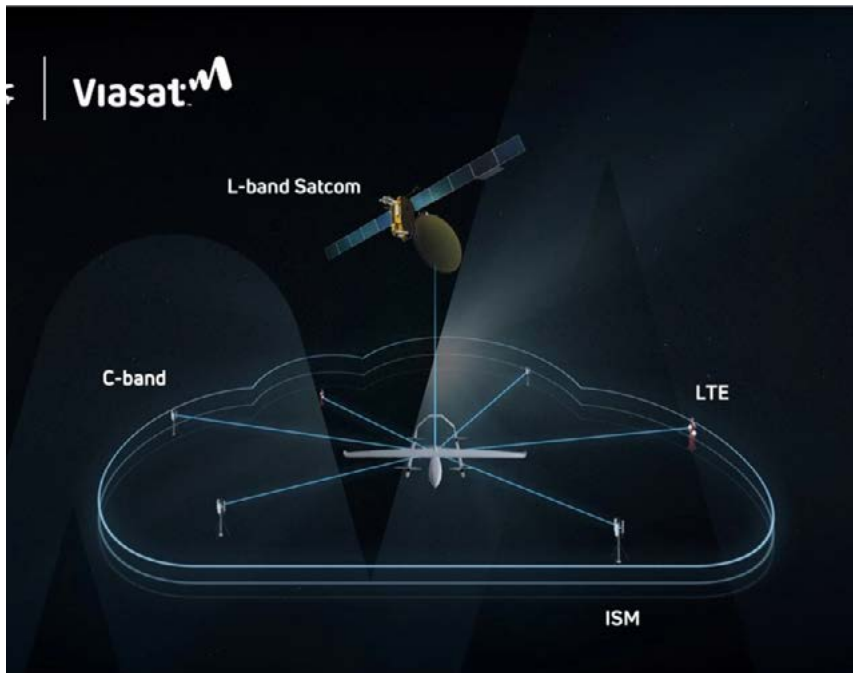
infrastructure for electric aircraft operations in the low altitude economy. By leveraging our expertise in the drone infrastructure, tracking and precision guidance, with RDMC's proficiency in cybersecurity, we aim to establish a robust framework that instills confidence among stakeholders and accelerates the adoption of low altitude solutions in healthcare, security, logistics, agriculture, disaster relief and

more."

Rafael DE MENDOZA, CEO of RDMC, added, "Cybersecurity is a critical aspect of the rapidly evolving low altitude landscape. As drones become increasingly integrated into our airspace, it's imperative to address cybersecurity challenges proactively. Our collaboration with EVA underscores our shared commitment to safeguarding the low altitude economy against cyber threats. By combining our cybersecurity capabilities with EVA's innovative solutions, we are poised to deliver comprehensive cybersecurity measures tailored to the unique requirements of the low altitude airspace."

Together, EVA and RDMC aim to develop and implement cutting-edge cybersecurity solutions, including secure communication protocols, encryption methods, and intrusion detection systems, to ensure the integrity and resilience of unmanned operations in the low altitude economy.

uAvionix Partners with Viasat to Deliver Seamless Global Communication Service for UAVs



Viasat, Inc., a global leader in satellite communications announce collaboration with uAvionix, a pioneer in the development of certified avionics for crewed and uncrewed aviation. uAvionix will join Viasat's Velaris Partner Network.

Following a strategic alliance agreement between the companies to develop products and services for the uncrewed aerial vehicle (UAV) market, uAvionix has begun integrating Viasat's Velaris module into its compact multi-LTE airborne radio system. Powered by Viasat's global L-band network, Velaris provides secure, resilient, L-band, communications for commercial UAVs. Velaris enables real-time monitoring for Beyond Visual Line of Sight (BVLOS) UAV operations, with seamless integration into commercial airspace.

uAvionix's system combines C-band, LTE, ISM and Viasat L-band, and carefully monitors and manages each data link using a DO-377A Link Executive Manager (LEM) while automatically registering aircraft with uAvionix's SkyLine Cloud Managed BVLOS service.

SkyLine is the first cloud-based command and control network that combines fleet management, network health monitoring, detect & avoid, and seamless make-before-break roaming between multiple radio networks and ground stations and is purpose built to enable Beyond Visual Line of Sight (BVLOS) safety cases.

During system integration testing in 2023, uAvionix configured and integrated a Velaris development terminal with its SkyLine system and established a "very stable streaming connection" in a matter of just days.

Cyriel Kronenburg, VP Aviation Networks at uAvionix said: "uAvionix successfully flew with Velaris connectivity in northern Montana. Notably, where the LTE radio had good performance on the ground before take-off, and the SkyLink C-band ISM radios had good performance while in our area of operations, the satcom let us close the gap by providing phenomenal performance with a very stable streaming connection while enroute from the airport to our deployed SkyStations. It's a huge testament to the ease of use of satcom and how supportive the Viasat team has been."

Joel Klooster, SVP, Flight Safety and AAM at Viasat, said: "uAvionix is a highly respected and innovative avionics and software company. This partnership formalizes a number of initiatives and programs the two companies are collaborating on, and we look forward to future projects. uAvionix has a proven track record of developing cutting-edge technology for the aviation industry, and our combined expertise will lead to even more advancements in the field."

Iridium Signs Five-Year Contract with L3Harris to Protect FAA Critical Infrastructure



Iridium Communications Inc., a leading provider of global voice and data satellite communications announced a new five-year commercial contract with L3Harris Technologies for the Iridium® Satellite Time and Location (STL) service. Under the terms of the five-year agreement, Iridium will provide the STL service to more than three dozen L3Harris-operated communications network backbone nodes and a similar number of Federal Aviation Administration (FAA) facilities throughout the United States.

L3Harris owns and operates a private nationwide network for the FAA, providing voice, data, and video communications for the National Airspace System operations and mission support functions. Timing synchronization is essential within the L3Harris communications network, especially since it supports several critical infrastructure applications. The Iridium STL service is a vital component of the overall network timing architecture that removes dependencies on GPS as a primary timing source.

Compact devices provided by Adtran's Oscilloquartz division that receive Iridium STL signals are also included in the solution for L3Harris. This high-performance equipment is easily integrated into the network and helps fulfill network timing synchronization requirements nationwide.

Today's communications networks and the applications that run over them have exceptional real-time requirements and are extremely sensitive to delays. For example, keeping database replications perfectly harmonized in a distributed architecture necessitates timing synchronization among servers within a data center as well as between data centers, even those that are thousands of miles apart.

"With Iridium STL, data center managers can count on dependable timing synchronization throughout their facilities," said Christina Riley, vice president and general manager, Commercial Resilient Time and Location, Iridium. "STL solutions offer cost-effective resiliency in critical infrastructure environments where GPS is unreliable or unavailable, so L3Harris and the FAA can benefit from uninterrupted, high-performance operations."

In April 2024, Iridium acquired Satelles, Inc., the leading provider of highly secure satellite-based time and location services. To learn more about timing synchronization for data centers or other critical infrastructure, visit: <https://www.iridium.com/satellite-time-location>.

PDRL AND PAVAMAN PARTNER TO REVOLUTIONIZE DRONE EXPERTISE; PAVING THE WAY FOR A NEW ERA IN THE DRONE INDUSTRY

PDRL, a leading software company, is excited to introduce a groundbreaking certification initiative designed for the innovative AeroMegh platform, marking a significant advancement in the drone industry. As drones become more prevalent with various applications, there is a growing need for skilled professionals to fully harness their potential. PDRL's AeroMegh platform, combined with its comprehensive certification program, equips professionals with the knowledge and skills necessary to excel in this rapidly evolving field.

AeroMegh, a cutting-edge Software-as-a-Service (SaaS) solution, offers a complete end-to-end solution for drone data acquisition, processing, analysis, and flight operations. Utilizing the capabilities of this robust platform allows users to efficiently handle complex tasks while saving valuable time and resources. PDRL's certification initiative provides professionals with a unique opportunity to gain a deep understanding and mastery of AeroMegh, giving them a distinct competitive advantage in the industry.

As a key player in the drone industry revolution, PDRL proudly plays a vital role, with over 50% of drone manufacturers endorsed under the AeroGCS type certification and an impressive 75% of agriculture drones certified with AeroGCS GREEN, a crucial part of the AeroMegh suite. Recognizing the evident demand for skilled resources, PDRL has meticulously developed a certification program aimed at enhancing the technical knowledge and competencies essential in the thriving drone ecosystem.

Participants in this program gain hands-on experience with the AeroMegh platform, refining their proficiency in its functionalities and applications. Completion of the program results in the prestigious PDRL



certified drone professional designation, setting them apart within their professional community.

The comprehensive certification curriculum covers all aspects of drone operations, from flight management to data acquisition, processing, and interpretation. Participants receive practical training, preparing them to navigate the complexities inherent in the thriving drone sector. The PDRL certification serves as a definitive endorsement, confirming that professionals possess the requisite expertise and commitment to excel in the fast-paced, ever-evolving drone landscape.

In a strategic move to ensure the widespread accessibility of this program, PDRL has partnered with Pavaman. Pavaman Aviation, an end-to-end drone solutions organization focused on agriculture, brings a passionate team of engineers and domain experts with a combined experience of over 50 years. Actively researching and providing technological solutions, Pavaman Aviation is establishing a state-of-the-art manufacturing facility in Hyderabad, spread across 18,000 sq.ft., positioning itself as a leader in drone training leading to DGCA certified remote pilot certification.

This partnership with Pavaman is poised to extend the program's reach, making PDRL's expertise accessible to professionals from diverse backgrounds and regions.

At the forefront of empowering professionals within

the drone industry revolution is PDRL's AeroMegh platform and its certification program. As the industry continues to progress, the importance of skilled individuals becomes more pronounced. PDRL's vision and dedication to harnessing drone data for actionable insights are evident in its meticulous certification initiative. This milestone exemplifies PDRL's unwavering commitment to shaping the future of the drone industry, providing boundless value to aspiring professionals and investors alike.

"The growth potential of the drone industry in our country is experiencing a significant upsurge, with projections indicating a target of reaching \$23 billion by 2030. Concurrently, the demand for drone pilot training is poised to pave the way for promising career opportunities in the years ahead. Recognizing the critical need for skilled resources, we emphasize the importance of top-notch training delivered by seasoned professionals to equip today's workforce effectively. Through our collaboration with PDRL, our goal is to offer comprehensive software application training, empowering drone professionals to deliver high-quality services across diverse industries," Mr. Anjaneyulu S VS, Founder & CEO of Pavaman Aviation's underscores the importance of this milestone.

Mr. Anil Chandaliya, Chief Executive Officer at PDRL, stated that, "PDRL has initiated a mission to certify 10,000 professionals on the AeroMegh platform. Partnering with Pavaman Aviation undoubtedly speeds up this progress. This collaboration marks a noteworthy achievement in PDRL's commitment to narrowing down the skill gap between the rising demand and the availability of certified professionals. Together, we will accelerate the development of skilled resources and promote more job opportunities within the industry, with the ultimate goal of positioning India as a 'Global Drone Hub' by 2030."

Amsterdam Drone Week, Commercial UAV Expo announce new partnership

Amsterdam Drone Week (ADW) has announced the re-establishment of the strategic partnership with Commercial UAV Expo. "Through this collaboration, future events in Europe will showcase an even more comprehensive overview of innovative and forward-thinking developments within the drone and air mobility sector," said an ADW press release.

Commercial UAV Expo Europe and Amsterdam Drone Week will be co-located 8-10 April, 2025 at RAI Amsterdam.

"The event brings together the whole drone and



air mobility ecosystem under one roof with the aim to accelerate scalability and improve integration of air mobility services worldwide. Commercial

UAV Expo Europe will feature a traditional trade fair that brings together all relevant market players and will offer a complete overview of industrial and enterprise solutions across key industry segments, including Construction, Drone Delivery, Energy & Utilities, Forestry & Agriculture, Infrastructure & Transportation, Public Safety & Emergency Services, Security, and Surveying & Mapping. This focused approach ensures that attendees will engage with the most relevant education, contacts, technology, and services, tailored specifically to their industry needs.

ANRA TECHNOLOGIES ADDS URBAN AIR MOBILITY SIMULATION/ MODELLING CAPABILITIES TO ITS U-SPACE PORTFOLIO



A NRA Technologies, a global leader in uncrewed traffic management and operational solutions announced a significant enhancement to its U-space services. By integrating advanced simulation and modeling capabilities, ANRA further empowers stakeholders to optimize airspace usage, mitigate risks, and enhance operational efficiency for urban air mobility (UAM) operations.

Key features of ANRA's advanced Simulation and Modeling services include:

- Realistic Simulation:** ANRA's state-of-the-art simulation tools provide stakeholders with highly accurate virtual environments to replicate real-world scenarios, enabling comprehensive testing and validation of UAM operations. Real-time simulation capabilities allow stakeholders, including city planners, Air Navigation Service Providers (ANSPs), civil aviation authorities (CAAs), and UAM operators, to assess and adapt to dynamic airspace conditions in real-time, ensuring safe and efficient operations.

- Dynamic Modeling:** Leveraging advanced algorithms and data analytics, ANRA's platform dynamically models airspace dynamics, traffic flows, and environmental factors to predict and optimize operational performance. Fast-time simulation capabilities enable stakeholders to evaluate various scenarios and assess the impact of proposed changes to airspace management procedures, infrastructure deployment, and regulatory frameworks, facilitating informed decision-making and strategic planning.

- Integration with Ground-Based Digital Infrastructure:** ANRA's simulation and modeling capabilities seamlessly integrate with ground-based digital infrastructure, such as ANRA's Vertiport Management Systems (VMS), to provide a holistic view of UAM operations. By incorporating data from VMS and other ground-based systems, stakeholders can optimize vertiport operations, streamline ground handling procedures, and enhance overall operational efficiency.

- Risk Assessment and Mitigation:** ANRA's simulation capabilities allow for detailed risk assessment and mitigation strategies. By injecting real-time data, stakeholders can identify potential hazards and implement proactive measures to ensure safety. By simulating potential scenarios and analyzing the associated risks, stakeholders can develop robust contingency plans and operational procedures to mitigate risks and enhance overall safety.

- Scalability and Flexibility:** Designed to scale with the evolving needs of the UAM industry, ANRA's simulation and modeling capabilities are adaptable to a wide range of use cases, from urban air taxis to drone delivery services. The platform's flexibility enables stakeholders to customize simulations according to specific operational requirements, aircraft types, regulatory frameworks, and infrastructure configurations, ensuring alignment with industry standards and best practices.

"We are excited to unveil our enhanced U-space services with advanced simulation and modeling capabilities," stated Amit Ganjoo, Founder and CEO of ANRA Technologies. "By combining cutting-edge technology with our extensive expertise in UTM solutions, we are empowering stakeholders to unlock the full potential of urban air mobility while prioritizing safety and efficiency."

HOVERFLY TECHNOLOGIES, INC. LEADS COMPLIANCE EFFORTS WITH FAA'S REMOTE ID RULE FOR DRONES

Hoverfly Technologies, Inc. [Hoverfly], the leading provider of advanced tethered drone technology, is proud to announce its full compliance with the Federal Aviation Administration's (FAA) Remote ID rule for drones. The company's proactive approach to regulatory compliance underscores its commitment to safe and responsible drone operations.

The FAA's Remote ID rule, which came into effect earlier this month, requires drones operating in U.S. airspace to broadcast identification and location information in real-time. This regulation is a crucial step in enhancing safety, security, and accountability in the rapidly growing drone industry.

Hoverfly Technologies has been at the forefront of developing innovative solutions to meet the evolving regulatory landscape. Leveraging its expertise in drone technology and software development, the company has successfully integrated Remote ID capabilities into its drones, ensuring seamless compliance with the FAA's requirements.

Beyond the Competition : In the last few years Hoverfly has also received approval for the toughest FAA waivers to attain, the Beyond Visual Line of Sight (BVLOS) waiver and the Multiple Systems waiver. These waivers allow for remote operation of the tethered UAS and empower one operator with the ability to fly multiple systems simultaneously. Hoverfly has shown the safety, reliability and broad operational experience with over 600 tethered drones fielded to DoD, Federal Agencies and other commercial operations. The US Military has extensively used Hoverfly systems in BVLOS operations to enable its many advances with its Robotic and Autonomous Systems efforts. Hoverfly will be using the multi-system operations with one operator, to increase its efficiency in production acceptance test efforts, as it continues scale-up production to meet US Military demand.

"Our team at Hoverfly Technologies is dedicated to advancing the safe and responsible use of drones," said Steve Walters, CEO of Hoverfly. "We recognize the importance of regulatory compliance in fostering public trust and confidence in drone technology. By adhering to the FAA's Remote ID rule, we are demonstrating our commitment to safety and accountability while empowering businesses and organizations to leverage drones for various applications."

Hoverfly's Remote ID-compliant drones enable operators to broadcast essential information, including the drone's serial number, location, and altitude, in real-time. This functionality enables authorities to identify and track drones operating within their jurisdiction, enhancing airspace security and facilitating incident response in case of emergencies.

In addition to Remote ID compliance, Hoverfly Technologies remains dedicated to developing cutting-edge drone solutions that meet the diverse needs of its customers across public safety, federal, and security industries.

Polish Air Navigation Services Agency Launches a New DroneTower Application

The Polish Air Navigation Services Agency launched a new DroneTower mobile application on April 15, 2024, which is now the official IT system for reporting the intention to fly a drone (Check-In). The new free DroneTower application, the creator and sole owner of which is the Polish Air Navigation Services Agency, is available for download in the Google Play and App Store. In a few steps, in an easy and intuitive way, the application allows, among others: to check flight conditions in a selected location, enables the operator/pilot of an unmanned aircraft (UAV) to notify the intention to fly (Check-In), conduct non-verbal two-way communication with an air traffic controller in the case of flights in the controlled zone of airports, inform about situations emergency situations and reminds about the expiring Check-In time, as well as provides information about other reported UAV flights in the immediate vicinity.

Therefore, the current, transitional solution checkin.pansa.pl has been withdrawn from operational use and will only be used in emergency situations. The new application is intuitive and comfortable to use. The DroneTower application is another source of imaging of the Polish airspace made available by PANSA. It contains information about both fixed and flexible zones – active and inactive. Using the application requires creating an account in the PansaUTM system. The DroneTower application is part of the PansaUTM system, therefore it allows operators to access the missions they have created and activate them at the time of Check-In.

"Today, drones are present throughout our lives – in agriculture, construction, and railways. Today, the drone determines our safety, information, the rapid flow of this



information and its accuracy. A well-functioning drone market directly affects the functioning of our economy. Launching this application was a necessity, we really wanted it to be our own, Polish product, controlled by the Polish Air Navigation Services Agency. We are in troubled times, the times we live in today require close links with security and the economy, which is why we decided to use the application that we own" said Dariusz Klimczak, Minister of Infrastructure.

"We are glad that for the upcoming drone season, UAV users have gained a new tool – the DroneTower mobile application, which will allow them not only to fulfill their obligation to report their intention to fly a drone, but above all thanks to two-way, non-verbal communication with the tower and by imaging the airspace, will increase the safety of all its users. DroneTower, together with a number of newly developed solutions and systems supporting drone flights that we plan to introduce to the market, will soon create a comprehensive and coherent drone ecosystem in Poland. We plan to further develop and introduce further functionalities in the DroneTower application in the coming months. We want to do it together with the

drone community" said Maciej Włodarczyk, head of the Unmanned Aerial Vehicles Center at PANSA.

First, it is planned to add weather information to the application, and then introduce the functionalities suggested by the BSP environment. In the coming weeks, a new module of the PansaUTM system – GeoZones – will be made available, used to apply for geographical zones for authorized entities. DroneTower will soon be integrated with electronic services for UAVs implemented by the Polish Air Navigation Services Agency in cooperation with the Civil Aviation Office and the Ministry of Infrastructure as part of the Digital Poland Operational Program 2014-2020, co-financed by the European Union.

Pursuant to Guidelines No. 15 of the President of the Civil Aviation Office of June 1, 2023, each UAV flight in Polish airspace should take place after informing PANSA about the intention to perform the flight via the IT system specified by the Agency. This means that each UAV flight must be preceded by a formal Check-In in the DroneTower application. The DroneTower user manual as well as the rules for conducting UAV flights in Polish airspace can be found on the pansa.pl website in the Drones tab.

Additionally, in recent weeks, as part of the "Digital Services for UAV" project implemented by PANSA in cooperation with the Civil Aviation Office and the Ministry of Infrastructure, a new portal called the National Drone Information System (KSID) was launched, allowing for matters related to the registration of operators and pilots, obtaining authorizations for various types of operations, access to information on CAO permits and the ability to digitally manage your basic data.

Skydweller Aero completes world's first successful unmanned/uncrewed flight of large scale solar-powered aircraft in the United States

Skydweller, an uncrewed solar-powered aircraft which has a wingspan greater than a 747 and leaves zero carbon footprint, just completed the world's first successful autonomous/unmanned/uncrewed flight of a large solar-powered aircraft, taking off, flying and landing by itself, without humans on-board or in control, from Stennis International Airport in the United States. "This is a true, world-changing first in the aerospace industry," said Robert Miller, CEO, Skydweller Aero, the aircraft's manufacturer, which is the only global manufacturer of large, autonomous solar-powered aircraft capable of perpetual flight. "Our fleet of uncrewed aircraft will enable a multitude of long-duration missions that support national security and non-terrestrial communications with revolutionary cost savings."

Skydwellers can be deployed for long-duration

missions such as providing continuous aerial overage above conflict zones, surveilling naval activity in contested waters without risking pilots' lives, detecting drug smugglers and pirates at sea, and tracking wildlife migration and poaching in Africa. "This really is a first when it comes to national security and protecting Americans," said Senator Roger Wicker, ranking member of the U.S. Senate Armed Services Committee who unveiled a Skydweller aircraft to the public last month. "It really is great news and it's only the beginning."

Skydweller aircraft are capable of perpetual flight, staying aloft for 90 days or more, at altitudes of up to 45,000 feet. In contrast, current combustion-powered aircraft, including piloted aircraft and drones, are limited to approximately 40 hours maximum flight time, limited by the endurance of pilots, the amount of fuel a conventional

aircraft can carry, and the need for frequent maintenance.

"We are applying cutting-edge, 21st century materials science, artificial intelligence, and software development to an industry that has spent more than 100 years building piloted, combustion-based aircraft," Miller continued. "This allows Skydweller to leap ahead of heritage aircraft manufacturers in terms of aircraft performance, flight duration, and cost effectiveness."

Skydwellers can accomplish missions with a single aircraft that has historically required a fleet of conventional aircraft, flight crews and maintenance personnel. A single Skydweller aircraft capable of perpetual flight, coupled with minimal operating personnel, replaces all of this cost for the same mission. As such, solar-powered Skydwellers are 10 to 100 times less expensive to operate than conventional aircraft for long duration missions.

Wingcopter and ITOCHU Start Type Certification Process for Wingcopter 198 in Japan

With the support of ITOCHU Corporation, Wingcopter has applied and received acceptance for opening the type certification process of its Wingcopter 198 delivery drone in Japan. This marks the first time a foreign company's drone and the first time a fixed-wing drone has been accepted under the unmanned aircraft class-1 type certification by the Japan Civil Aviation Bureau (JCAB) of the Ministry of Land, Infrastructure, Transport and Tourism.

Upon successful type certification, Wingcopter will be granted permission to conduct flights equivalent to Level 4. Level 4 refers to flights beyond visual line of sight (BVLOS) in populated areas, significantly expanding the application range of drones. This would make Wingcopter and its partner ITOCHU one of the first companies that could set up commercial BVLOS operations in Japan. With its aging population and secluded landscapes, including many inhabited islands, the country is considered one of the world's largest markets for drone deliveries in the future.

ITOCHU and Wingcopter aim to use the Wingcopter 198 to establish drone delivery networks and services that can provide an air bridge to overcome various social challenges by transporting vital and urgently needed goods quickly and environmentally friendly over many kilometers and above challenging terrain.



Florian-Michael Adolf, Head of Certification at Wingcopter, comments: "This milestone represents significant progress towards realizing commercial drone delivery in Japan and beyond. At Wingcopter, we are striving for type certification, as it underscores our commitment to safety of our product, as well as the diligence and professionalism of our entire team. We would like to thank our partners at ITOCHU for supporting us in this process with their extensive knowledge, network, and resources."

Masaharu Sato, Deputy General Manager, Aerospace Department at ITOCHU Corporation, adds: "We see great potential in Wingcopter's delivery drone to make everybody's life better and are delighted with the promising progress in realizing this value. It is our honor to collaborate with the dedicated professionals at

Wingcopter, led by the management team around Tom, Jonathan and Ansgar. We look forward to continuing this exciting journey together."

ITOCHU, which is a long-time business partner and investor in Wingcopter, will conduct several Proof of Concepts under special permits until the expected type certification. In May 2023, ITOCHU and Wingcopter successfully conducted a verification experiment for the implementation of medical blood product transportation by Wingcopter's delivery drones, the first of its kind in Japan.

In addition to the type certification efforts in Japan, Wingcopter is currently undergoing the FAA type certification process in the USA, which will allow to unlock the huge commercial potential of the North American market as well.

AMAZON DRONE DELIVERY IS COMING TO ARIZONA

We're now adding a new location and entering into the next stage of the program's evolution. Later this year, drone deliveries are coming to the West Valley of the Phoenix Metro Area in Arizona.

With this new location, we'll be fully integrated into Amazon's delivery network, meaning, for the first time, drones will deploy from facilities next to our Same-Day Delivery site in Tolleson. These smaller sites are hybrid—part fulfillment center, part delivery station. They allow us to fulfill, sort, and deliver products all from one site so we can get packages out to our customers even quicker. Our Same-Day Delivery sites are situated close to the large metro areas they serve, which means customers get their orders faster. And with connections to the larger Amazon fulfillment centers nearby, we are able to offer Same-Day Delivery on millions of items.

We're currently working with the Federal Aviation Administration (FAA) and local officials in Tolleson to obtain all necessary permissions to conduct these deliveries in Tolleson. Once we've received all the necessary approvals, we'll begin reaching out to

customers in the West Valley so they can receive drone deliveries when the service goes live later this year.

"As Amazon embarks on the national expansion of its Amazon Drone Delivery Program, we're proud to have their innovative presence in our community. By bringing this service to new communities, they're not just delivering goods; they're delivering opportunities and economic growth for all," said Juan F. Rodriguez, mayor of Tolleson. "Amazon's commitment to innovation exemplifies the entrepreneurial spirit that drives our city forward."

"This kind of delivery is the future, and it's exciting that it will be starting in the Phoenix Metro Area," said Kate Gallego, mayor of Phoenix. "The shift toward zero-emission package delivery will help us reduce local pollution and further cement our city as a hotbed for the innovative technology of tomorrow."

As we look to the future and prioritize our resources to continue growing the program, we've also made the decision to close our delivery site in Lockeford. We'll offer all current employees opportunities at other sites, and

will continue to serve customers in Lockeford with other delivery methods. We want to thank the community for all their support and feedback over the past few years. We'll continue delivering in College Station, Texas, and will open further U.S. locations in 2025.

Next steps on the new MK30 drone

Our team is currently conducting flight tests for our new MK30 drone. This new drone includes innovative, safety-critical features that allow it to deliver packages to customers with smaller backyards and in more densely populated suburban areas. The MK30 is quieter and can fly twice as far as our current drone. While our current drone flies during clear weather, the new MK30 can operate in more diverse weather conditions, including light rain.

We're flying the new MK30 drone and putting it through its paces at our indoor and outdoor test facilities. We'll use the data from this process to demonstrate to regulators around the world the reliability of our system. The MK30 drone will make deliveries to customers later this year.

DJI AGRAS T50 AND T25 EXPAND AERIAL CROP PROTECTION CAPABILITIES



DJI, the world leader in civilian drones and creative camera technology announced the international launch of the Agras T50 and Agras T25 drones. Building on the popular Agras drone line, the T50 offers unmatched efficiency for larger-scale growing operations, while the lightweight T25 is designed to be more portable for smaller fields. Both drones are compatible with the upgraded SmartFarm app which offers powerful features for comprehensive aerial application management.

“As a global leader in agriculture technology, we aim to push precision agriculture forward with the latest DJI Agras drones for spraying and spreading. To date, over 980 million acres worldwide across over 100 countries and regions have been treated by DJI Agriculture drones,” said Yuan Zhang, Head of Global Sales at DJI Agriculture. “With our proven solutions for crop protection, family farmers and large-scale growers can improve yields, reduce chemical usage, and cut costs, while minimizing environmental impact.”

Better Growth with the Agras T50: The Agras T50 is a flagship of efficiency and stability, born from a deep understanding of the demands of large-scale farming. It inherits a coaxial dual-rotor design and 54-inch propellers for next-level stability when carrying 40kg spraying or 50kg spreading payloads, which enables

efficient spraying of up to 50 acres (21 hectares) per hour¹. T50’s dual atomization spraying system, with an increased flow rate of up to 16 liters per minute with two sprinklers and adjustable-sized spray droplets, is ideal for a variety of applications from fields to orchards. Easily converted to its spreading configuration, the T50 can carry 50 kg of dry granules and spread at a flow rate of up to 108 kg/min¹ or 1.5 tonnes per hour¹. This combination of power, precision, and versatility sets T50 apart as a top choice in agricultural drones, designed to meet the evolving needs of modern farming.

Breakthroughs in Connectivity and Stability : T50 features an upgraded four-antenna O3 Transmission system, extending the remote controller-drone connection up to 2 km¹. For operations over mountains and other complex environments, users can deploy a DJI Relay to extend transmission range and stability for improved operation safety.

Dual Radar and Dual Binocular Vision for Obstacle Bypassing and Terrain Following : T50 features dual Active Phased Array Radars and binocular vision sensors. These work together to accurately reconstruct the T50’s surroundings and detect nearby obstacles, for intelligent obstacle sensing and bypassing, and Terrain Following over slopes.

Four Sprinkler Kit : T50 can be equipped with an

additional pair of centrifugal sprinklers, increasing flow rate to 24 liters per minute. This benefits tasks like orchard spraying that require a higher flow rate to penetrate dense canopies and treat the fronts and backs of leaves.

9-Minute Fast Charging : T50 is powered by a DB1560 Intelligent Flight Battery, with a capacity of up to 30 Ah and 1500 charge cycles¹. The D12000IEP Multifunctional Inverter Generator paired with the Air-Cooled Heat Sink enables 9-minute¹ fast charging, allowing for continuous operations with a pair of batteries.

Agras T25 - Precision Agriculture in a Portable Package : The Agras T25 packs all the advanced features of the T50 into a smaller, portable design. It can carry a 20kg spraying or 25kg spreading payload and includes the T50’s top features like multidirectional obstacle avoidance, Terrain Following, ultra-fast battery charging, one-tap takeoffs, and automatic operations. This makes it perfect for solo use in small to medium-sized farms.

DJI SmartFarm - Essential Agras Assistant : The DJI SmartFarm app streamlines daily drone operations for crop protection and plot management with enhanced data visualization and reporting, a dynamic device management dashboard, and easy access to after sales support and learning resources on DJI Academy.

Eiger Drone Remote ID Compliance Accepted by the FAA, Paving the Way for Advanced US Operations

RigiTech, a leading Swiss drone technology company, is proud to announce that it has received confirmation from the FAA that the Eiger drone is now registered as a Remote ID compliant UAS, marking a significant milestone in the company's efforts to operate beyond visual line of sight (BVLOS) in the United States.

Remote ID is a crucial development in aviation technology, providing the capability for drones in flight to offer identification and location information that can be received by others. This system is essential for the safety and security of airspace, allowing organizations such as the FAA, law enforcement, and other federal agencies to locate the control station quickly and efficiently in instances where a drone may be flying unsafely or in restricted areas.

RigiTech's Eiger drone's compliance with the standard Remote ID requirements ("ASTM F3411-22a-RID-B compliant") is not just a compliance achievement; it is a testament to our commitment to advancing drone technology responsibly and safely. The "B" in the official marking signifies Broadcast, indicating that the Eiger drone utilizes a broadcast method to share its remote identification information, a method chosen for its reliability and security.

This approval lays the necessary groundwork for BVLOS operations by meeting one of the FAA's key safety and security prerequisites. It is a significant step forward in integrating drones into the National



Airspace System (NAS) fully, demonstrating RigiTech's leadership in developing technology that meets the rigorous standards required for safe airspace integration.

A recent study by SkySafe, a drone tracking and intelligence company, highlighted the challenges in the industry by revealing that a majority of drone manufacturers have not developed their technology in line with established standards. RigiTech's achievement sets it apart, showcasing our dedication to not only meeting but exceeding regulatory expectations and advancing the drone industry's capabilities responsibly.

"Achieving this approval is a crucial

milestone for RigiTech and the drone community at large, propelling us towards more complex and beneficial drone operations. We are committed to continuing our work with the FAA and other stakeholders to ensure a safe, secure, and innovative future for drone technology," said David Rovira, Chief Business Officer and co-founder at RigiTech.

RigiTech is excited about the future of drone operations in the United States and globally. With this FAA approval, we are one step closer to realizing our vision of fully integrated, safe, and efficient drone operations that can transform various sectors, from logistics to emergency services.

Percepto Achieves Groundbreaking BVLOS Approval for Drone Operations in Germany

Percepto, the industry-leading autonomous inspection and monitoring solutions provider, is thrilled to announce that it has successfully facilitated Beyond Visual Line of Sight (BVLOS) approval for one of its esteemed clients in Germany. This landmark approval, officially sanctioned by the Luftfahrt-Bundesamt (LBA), Germany's civil aviation authority, represents a significant leap forward in the use of drone-in-a-box technology for industrial inspections and monitoring.

This approval enables fully automated drone operations BVLOS without the need for visual observers on-site, around the clock. This capability is particularly notable as it extends to controlled

airspace, demonstrating an exceptional level of trust and confidence in the safety and reliability of Percepto's drone-in-a-box solutions.

The approval process was spearheaded by Percepto, drafting the necessary documents and closely collaborating with German regulators to meet the stringent requirements for BVLOS operations. This achievement not only underscores Percepto's commitment to advancing drone technology in compliance with European regulations, but also solidifies a close working relationship with German authorities, suggesting expedited approvals for future deployments.

The LBA has welcomed this development,

stating, "We are pleased with Percepto's achievement in obtaining BVLOS approval in Germany. This exemplifies the potential of advanced drone technology to transform industries while ensuring LBA's highest standards of aviation safety."

"Percepto's achievement in Germany is a testament to its leadership in the autonomous drone industry and its ability to navigate and comply with complex regulatory environments," said Neta Glikman, Percepto VP of Policy and Government Affairs. "Percepto extends its gratitude to the LBA for their cooperation and looks forward to contributing further to the safe and effective integration of drones into German airspace."

Terra Drone, Unifly, and Aloft Technologies Launch UTM Development for AAM Targeting Global Markets



Terra Drone Corporation, a leading drone and Advanced Air Mobility (AAM) technology provider headquartered in Japan, has announced the launch of joint development with its Group companies Unifly NV (“Unifly”) and Aloft Technologies Inc. (“Aloft”) focused on UAS Traffic Management (UTM) for AAMs targeting global markets. Terra Drone has been making strides in its pioneering UTM business via strategic investments in Unifly, a leading UTM technology provider based in Belgium, and Aloft, which has the top UTM market share in the U.S. This collaboration marks the world’s first-ever (2) joint UTM development for AAMs by multiple companies with extensive track records in UTM implementation and operation. The three companies made the announcement at the prominent uncrewed system and robotics expo XPONENTIAL 2024 in San Diego.

Terra Drone, Unifly, and Aloft are embarking on this joint UTM development to seize the opportunities presented by the rapid global progress in electric vertical take-off and landing aircrafts (eVTOLs), which are poised to revolutionize transportation. According to research by Morgan Stanley, the Urban Air Mobility (UAM) market is expected to grow to \$1 trillion by 2040 and \$9 trillion by 2050 (3). In the meanwhile, eVTOLs have been capturing the public’s imagination worldwide through test flights and prototype showcases.

The three companies are uniquely positioned for joint UTM collaboration given their decade of experience in UTM development since the dawn of the modern drone industry. Terra Drone is the world’s second-largest drone solution provider (4). Unifly has a world-class track record in UTM implementation at the national level in countries such as Canada and Germany. Aloft has an over 84% share of the UTM market in the U.S. (5), considered the world’s largest market for drones and eVTOLs.

The companies proudly announce initiatives aimed at enhancing their existing UTM platforms, in anticipation of the upcoming surge in eVTOL aircraft and drone activities. The shared vision for the UTM platform is to enable safe and efficient flight operations for eVTOLs and drones in the foreseeable future. The platforms are designed with a strong emphasis on automation, currently boasting advanced planning functionalities and sophisticated NOTAM (6) parsing capabilities, underscoring our commitment to supporting AAM.

Recognizing the evolving needs of the AAM industry, they are dedicated to further extending their platform by incorporating additional functions vital for this sector. These enhancements, designed with automation at their core, will not only streamline operational efficiencies but also pave the way for the integration of their increasingly automated and sophisticated UTM technology into the design and operational framework of AAMs. Through these efforts, they aim to set new standards in UTM and to facilitate the seamless integration of eVTOLs and drones into the national airspace, bolstering the potential for the AAM industry.

In pursuit of this vision, Terra Drone, Unifly, and Aloft are actively seeking collaboration with a broad array of partners. This includes eVTOL manufacturers, eVTOL operators, vertiport (7) operators, aviation authorities, air navigation service providers (ANSPs), urban planners to seamlessly integrate AAM into city infrastructures, and educational institutions for research and development.

Through this groundbreaking initiative, the three companies aim to build a global UTM infrastructure that kickstarts the AAM industry worldwide. By forging strategic partnerships across these diverse sectors, they seek to create a cohesive ecosystem that not only supports the growth of AAM but also addresses the broader challenges of urban mobility, sustainability, and air traffic safety.

Aloft Integrates with Skydio to Launch Live UTM Telemetry, Revolutionizing Drone Airspace Management



Aloft Technologies, Inc., a leader in drone technology solutions announced a groundbreaking integration with Skydio, the leading U.S. drone manufacturer and world leader in autonomous flight technology, to integrate Live UTM (Uncrewed Traffic Management) Telemetry. This integration is set to transform how drone operations are managed in the National Airspace System, enhancing safety and operational efficiency for increasingly complex and advanced operations.

Live telemetry for all Skydio aircraft is live and available today for all Aloft enterprise, government, and public safety customers.

Live UTM Telemetry will provide real-time data directly to drone operators and airspace managers, facilitating more informed decision-making and significantly reducing the risk of airspace conflicts. This initiative represents a major step forward in the collaborative efforts to integrate drones safely into the national airspace system.

Jon Hegranes, CEO and Founder of Aloft, expressed his enthusiasm for the partnership, stating, “We are thrilled to integrate with Skydio to bring Live UTM Telemetry to the forefront of our patented Dynamic Airspace technologies. This innovation is not just about enhancing operational capabilities—it’s about setting new standards for safety and scale in drone operations. By integrating real-time telemetry data, we are empowering pilots and regulators with the tools they need to manage and utilize our skies more effectively.”

The collaboration between Aloft and Skydio marks a significant milestone in the drone industry, paving the way for advanced UTM solutions to support thousands of drones flying simultaneously in our skies. The technology is expected to benefit a wide range of industries, from emergency services and disaster response to infrastructure inspection and delivery services. This UTM integration builds on the existing automated flight log integration between Skydio and the Aloft Air Control platform.

For more information about Aloft’s Live UTM Telemetry integrations with Skydio, as well as other makes and models, please contact sales@aloft.ai or your Aloft representative to access these new capabilities.

NASA Selects Anzen Unmanned for Expeditionary BVLOS and UTM for Airborne Wildfire Response

NASA announced the selection of Anzen Unmanned's project entitled "Expeditionary BVLOS Infrastructure and UTM for Airborne Wildfire Response" for the Phase II SBIR (Small Business Innovation Research) program. This transformational project combines our proven Beyond Visual Line of Sight (BVLOS) solutions and UAS Traffic Management (UTM) experience with OneSky's UTM solution to overcome current operational limitations in airborne wildland fire and emergency response operations.

The Expeditionary BVLOS Kit and UTM Airspace Assistant will integrate with current wildland fire UAS, equipment, and airspace management, supplementing them with additional capability and safety. The solution provides a foundation for future growth, enabling more effective use of UAS, integrated ground and airborne infrastructure, enhanced airspace management, and transformative autonomy.

The Expeditionary BVLOS Kit provides a common foundation for UAS BVLOS operations and



airspace surveillance:

Cooperative and uncooperative aircraft surveillance - detection, tracking, and alerting

- Micro-weather surveillance and alerting
- Local and wide-area communications
- BVLOS UAS operations in all phases of wildland fire management (pre-, active-, and post-fire)
- Built on Anzen Unmanned BVLOS approval blueprint used for multiple Part 107 BVLOS waivers and 44807 exemptions
- Designed for BVLOS today and for adaptable for future BVLOS regulations
- The UTM Airspace Assistant is an operations

center on-premise UTM implementation that leverages the kit's airspace surveillance, weather surveillance, and communications to:

- Provide a composite airspace picture (both manned and unmanned)
- Provide a composite micro- and macro-weather picture including real-time and predictive weather
- Assist in identifying and mitigating conflict
- Automate management of UAS operations

The solution will support both integrated and independent BVLOS UAS operations in all phases of wildland fire management (pre-, active-, and post-fire). Independent UAS BVLOS operations enable individual operations (e.g., pre-fire fuels survey) or when wide-area communications are not available (disconnected operations). When wide-area communications are available, the Expeditionary BVLOS Kit will provide its surveillance data to the UTM Airspace Assistant for incorporation into a composite situational awareness picture supporting manned and unmanned air operations management.

DronePort Network Announces Strategic Partnership with Vigilant Aerospace to Provide Airspace Management at Drone Ports across the US

Vigilant Aerospace, a leading developer of detect-and-avoid and airspace management software for uncrewed aircraft systems (UAS or drones), has been announced as a strategic partner by DronePort Network to provide Airspace Management (ASM), Detect-and-Avoid (DAA), and Unmanned Traffic Management (UTM) for future drone port projects throughout the United States. Vigilant Aerospace's FlightHorizon solution provides the advanced situational awareness required for safe, scalable autonomous flight.

DronePort Network is a system integration and infrastructure development company focused on helping regions and communities transition to the next generation of the aviation economy. They do this through the creation of "drone ports" - dedicated autonomous aviation ecosystems primed for the development, testing and deployment of uncrewed aircraft systems (UAS or drones) and Advanced Air Mobility (AAM) aircraft.

The company works with regional centers to

leverage existing infrastructure, such as airfields and hangers, to build dedicated drone port facilities for a wide range of uses - from advanced autonomous flight testing and training centers to new air services across both the private and public sector. DronePort Network provides a full range of services required to safely integrate drones and related services into the economy and national airspace - operational, regulatory and technology - reflecting the broad range of considerations around safe, large-scale autonomous flight. This includes guidance for meeting strict FAA requirements and selecting appropriate technology partners.

FlightHorizon provides airspace managers with a 2D or 3D view of all aircraft in the selected airspace using a combination of sensors and data sources to create an airspace safety picture for pilots, airspace managers and command centers, required to meet FAA regulatory requirements for advanced UAS flights.

Quote from Craig Mahaney, CEO, DronePort

Network "The growth around autonomous flight is enormous, and regions and communities can reap significant benefits in commercial activity, new jobs and new service opportunities. We're at a pivotal time for building the critical infrastructure needed to support this, and Vigilant Aerospace's FlightHorizon provides an important solution for ensuring safe skies for autonomous flight. We're collectively pioneering game-changing aviation environments with far-reaching impact."

Quote from Kraettli Epperson, CEO of Vigilant Aerospace "There is immense opportunity for public-private partnerships throughout the US to build infrastructure to accommodate the next generation of aviation. DronePort Network is a perfect example of this innovative approach, bringing together the expertise necessary to make commercial autonomous flight a reality. We're thrilled to launch this strategic partnership and are excited to be a part of the future development of drone ports in the US."

EVE AIR MOBILITY AND AIRX SIGN LOI FOR UP TO 50 EVTOLS, SERVICE SUPPORT, AND URBAN ATM SOFTWARE

Eve Air Mobility has signed a letter of intent with AirX Inc., Japan's largest public helicopter air charter service, for up to 10 firm and up to 40 optional electric vertical takeoff and landing (eVTOL) aircraft. The order will support the continued development and scaling of innovative transportation operations in Japan.

"We appreciate AirX's trust and confidence in Eve by not only purchasing our eVTOL aircraft, but services and operations solutions and our Vector - the urban air traffic management software," said Johann Bordaís, CEO of Eve. "Japan has been progressive in their approach and interest in eVTOL operations and we look forward to continuing to expand our relationships and as we support Japan's urban air mobility objectives going forward."

"We are deeply impressed not only by EVE's technological capabilities, but also by their commitment to building an ecosystem," said Kiwamu Tezuka, CEO of AirX Inc. "Our aim is to revolutionize the current industry, making transport services useful and affordable for everyone. By integrating our knowledge, experiences, and existing business platform with EVE's comprehensive solutions, we hope to overcome transportation limitations by advancing eVTOL operations in Japan."

AirX is a pioneer of advanced air mobility in Japan and a digital platform company offering a total solution



of charter services to the Japanese public via AIROS Skyview. AirX announced the launch of the Greater Tokyo Area's first eVTOL test field, the UAM Centre. This innovative initiative builds on AirX's rich history of offering unique aerial experiences through AIROS Skyview since 2015, marking a significant milestone in the company's journey towards sustainable and accessible urban air mobility (UAM). The UAM Centre is set to revolutionize air travel in the Tokyo metropolitan area, showcasing the company's commitment to innovation and the future of transportation.

The Asia-Pacific region is an important market for Eve Air Mobility. The company continues to build diverse relationships and work with its customers and potential customers to bring a new mode of transportation to help ease traffic congestion in the region. In addition to Japan, Eve is already working closely with

customers and operators in Australia, India and South Korea among other locations. As the company works with local partners, its goal is to collaboratively build UAM ecosystems with its operating partners in each of the intended launch communities and is sharing information insights as discussions continue.

Eve's eVTOL aircraft utilizes a lift+cruise configuration with eight dedicated propellers for vertical flight and fixed wings to fly on cruise, with no change in the position of these components during flight. The latest concept includes an electric pusher powered by dual electric motors that provide propulsion redundancy with the goal of ensuring the highest levels of performance and safety. While offering numerous advantages including lower cost of operation, fewer parts, optimized structures and systems, it has been developed to offer efficient thrust with low sound.

EMBRAER SIGNS MOU WITH AICAT TO IMPROVE COOPERATION WITH THE AUSTRIAN AEROSPACE INDUSTRY

Embraer and AICAT (Austrian Industrial Cooperation & Aviation Technology) signed a Memorandum of Understanding to enhance international cooperation in the aerospace sector. The cooperation adds to Embraer's existing relationships in Austria while exploring additional opportunities such as joint research, technology development, and contributions from the Austrian ecosystem to the supply chain of the Embraer aircraft programs. AICAT is an organization part of the Austrian Federal Economic Chamber (WKO), representing the entire aviation technology community in Austria.

"For AICAT, an association representing about 100 Austrian aviation companies most of which are SMEs and position themselves in the supply chain, an intensified cooperation with Embraer underpinned



by an MoU is a great opportunity and will help both, Embraer and the Austrian Aeronautical sector, creating a more structured collaboration for their

mutual benefit", says Reinhard Marak, CEO of AICAT.

"Embraer and Austria have been building a long-term relationship for many years, and this partnership will continue to advance with the new Memorandum of Understanding. We thank AICAT, the companies, and the Austrian government representatives for this important step in our partnership," says Marcio Monteiro, Market Intelligence Vice-President, Embraer Defense & Security.

The announcement took place at Embraer headquarters, in São José dos Campos. After the ceremony, representatives from Austrian aerospace companies and the Austrian Government had the opportunity to meet Embraer specialists in different technologies to explore opportunities for cooperation.

EHang Secures Production Certificate from CAAC



EHang Holdings Limited, the world's leading Urban Air Mobility ("UAM") technology platform company, announced that EHang has successfully obtained the Production Certificate ("PC") for its EH216-S passenger-carrying pilotless electric vertical takeoff and landing ("eVTOL") aircraft issued by the Civil Aviation Administration of China ("CAAC"), which is the world's first PC granted in the global eVTOL industry. Following the groundbreaking obtaining of the Type Certificate ("TC") and the Standard Airworthiness Certificate ("AC") for the EH216-S, this remarkable achievement is another significant leap towards mass production for the eVTOL aircraft and the following commercial operations.

The PC is a critical certificate issued by the national aviation authority, the CAAC, to the aircraft manufacturer. Securing this certificate indicates that EHang has established a mass production quality management system that meets the CAAC's airworthiness regulatory requirements, and the Company has been authorized for continued mass production. It is also a robust assurance for the product quality produced by EHang. The mass production quality management system for the EH216-S encompasses raw materials, supplier management, production organization, production quality control, aircraft pre-delivery test, after-sales repair and maintenance, etc. The system establishes clear guidelines and documentation for every step in the production procedure, ensuring comprehensive traceability and safety control to guarantee that each aircraft and its components rolling off the production line are in strict compliance with the approved type design and safety requirements.

During the PC certification process, the review team of the Central-South Regional Administration of the CAAC conducted a comprehensive document review and on-site verification and validation from multiple perspectives of quality, production, testing and after-sales, based upon the Regulations on Certification of Civil Aviation Products and Parts (CCAR-21-R4), and the Production Approval and Supervision Procedures (AP-21-AA-2023-31). This included a strict and thorough assessment of EHang's production capabilities and quality management system, including a total of 19 elements, such as organizational management, design documents control, personnel capabilities and qualifications, supplier management, production process control, inspection and testing, among others.

Mr. Heyong Lin, Director of the Airworthiness Division of the Central-South Regional Administration of the CAAC, stated, "In the past six months, EHang's EH216-S has secured three groundbreaking achievements in airworthiness certification: the world's first TC, PC and standard AC for the passenger-carrying UAV. EHang epitomizes a pioneering enterprise of new business model in the Central and Southern region, representing new quality productive forces. The Central and Southern Regional Administration of the CAAC is dedicated to offering steadfast support to EHang, bolstering the high-quality development of the low-altitude economy."

Mrs. Dan Xu, Deputy District Mayor of Huangpu District, Guangzhou, stated, "We are glad to witness this important milestone for the EH216-S, signifying it entered into mass production from the design and development stage. It also marks a significant stride towards the industrialization of manufacturing sector in low-altitude economy industry. We believe the collaborative efforts of pioneering low-altitude enterprises like EHang and governments, will infuse the industry with momentum and confidence, propelling the low-altitude economy towards a prosperous future."

Mr. Huazhi Hu, Founder, Chairman and CEO of EHang, remarked, "The issuance of the PC is pivotal for the EH216-S as it opens the door to mass production, and a crucial step for our advancement towards commercial operations. As of today, the EH216-S has secured the TC, PC, and Standard AC from the CAAC. All the notable accomplishments relied on the collaboration and tireless efforts of the CAAC's expert team and EHang's team, and reflected our collective innovation, wisdom and expertise in aircraft design, manufacturing, quality management and other fields. With the PC as the starting point, we are poised to gradually expand production and delivery to meet escalating market demands. Our vision is to introduce safe and reliable pilotless eVTOL aircraft to the global market, thereby offering safe, autonomous and eco-friendly air mobility services to everyone."

Lilium Starts Production of High-Performance Battery Packs for the Lilium Jet



Lilium N.V., developer of the first all-electric vertical take-off and landing ("eVTOL") jet, announced that it has started production of the advanced, aviation grade battery packs that will power the Lilium Jet on its first piloted flight, targeted for end of 2024. This latest milestone represents a landmark in the development of the Lilium Jet and follows extensive testing of battery pack subcomponents from individual cell to stack level with a focus on performance, safety and regulatory conformity.

Lilium's unique, pioneering battery pack is comprised of lithium-ion cells with silicon-dominant anodes that will allow for higher energy, power, and fast-charging capabilities than graphite anode cells. Leading automakers such as Mercedes, Porsche, and GM plan to incorporate silicon anode technology into their premium electric vehicles. Lilium's battery packs are being designed to meet EASA's stringent aircraft safety requirements regarding shock resistance, heat resistance, containment, and redundancy. They are also being designed to deliver outstanding power and energy density to support a business model focused on regional, rather than urban, air mobility. Lilium has secured comprehensive intellectual property rights for its unique battery technology.

The Lilium Jet battery packs are being assembled at Lilium's purpose-built battery factory, located at Lilium's headquarters outside Munich, with the aid of new generation digital tools that enable process control, efficient data collection and traceability. Lilium has been supported in the design of the assembly line and initial production ramp up by suppliers with extensive experience in battery industrialization, especially in the automotive sector. Yves Yerns, COO of Lilium said: "The start of production of the battery packs is a proud moment for Lilium. Battery technology is central to the goal of delivering sustainable regional air mobility, including overcoming the challenges of developing and industrializing a battery pack that will meet the stringent safety standards of aircraft certification. With the start of production of the Lilium Jet's unique high-performance aircraft battery packs, Lilium has laid a further cornerstone towards realizing the vision of electric aviation."

The first units off the battery assembly line will be used for verification testing ahead of the Lilium Jet's first piloted flight. Each Lilium Jet aircraft will be equipped with ten independently functioning battery packs that are designed to enable safe flight and landing, even in case of failure of any single battery pack.

EVE AIR MOBILITY NAMES KAI AS SUPPLIER FOR EVTOL PYLONS

Eve Air Mobility has named Korea Aerospace Industries Ltd. (KAI), as supplier for its electric vertical takeoff and landing aircraft's pylons. Pylons are a key component of the airframe that provide support for the aircraft's electric power units and eight lift propellers.

"KAI has an excellent reputation for quality, technology and business performance supplying numerous aerostructure components for a variety of aircraft including Embraer's E-Jet E2 model," said Johann Bordais, CEO of Eve. "We are excited to have KAI join a strong and diverse list of suppliers who will work with us to supply components from prototype through production."

During the past 30 years, KAI has supplied major aerostructure components to global aircraft manufacturers, including Embraer for its E-Jet E2 model. The agreement marks KAI's formal entry into the advanced air mobility (AAM) market. Last year, KAI CEO Goo Young Kang designated space and future air mobility as the company's core future businesses through its 2050 vision declaration. KAI recently announced a significant investment in production infrastructure with the goal of growing its market share in the rapidly growing AAM market going forward.

KAI is the latest supplier for Eve's eVTOL to be named by Eve. In February, Eve named Aciturri (wing skin, spars and leading/trailing edges of the wing) and Crouzet (pilot controls) as suppliers. In January, Eve announced that Thales would supply sensors and



a computer, while Honeywell would supply guidance, navigation and external lighting. RECARO Aircraft Seating was selected to supply the eVTOL's seats and FACC will supply the horizontal and vertical tail including the rudder and elevator. In 2023, Eve selected Garmin to supply the aircraft's avionics, Liebherr-Aerospace to supply the flight controls actuators and Intergalactic to provide the thermal management system. The company also named Nidec Aerospace, LLC, a joint venture between Nidec and Embraer, to provide the electric propulsion system, BAE Systems to provide the energy storage system and Duc Hélice Propellers to supply the rotors and propeller.

Eve's eVTOL aircraft utilizes a lift+cruise configuration with eight dedicated propellers for vertical flight and fixed wings to fly on cruise, with no change in the position of these components during flight. The latest concept includes an electric

pusher powered by dual electric motors that provide propulsion redundancy with the goal of ensuring the highest levels of performance and safety. While offering numerous advantages such as lower cost of operation, fewer parts, optimized structures, and systems, it has been developed to offer efficient thrust with low sound.

Last year, the company announced that its first eVTOL production facility will be located in the city of Taubaté, in the state of São Paulo, Brazil. The company has begun assembly of its first full-scale eVTOL prototype which will be followed by a test campaign. Eve's eVTOL is scheduled to begin deliveries and enter into service in 2026.

Concurrently, Eve continues to develop a comprehensive portfolio of agnostic service and operations solutions, including Vector, a unique Urban Air Traffic Management software to optimize and scale Urban Air Mobility operations worldwide.

AutoFlight delivers first electric air taxi to customer in Japan

AutoFlight has achieved a significant milestone by officially delivering its first Prosperity aircraft to a customer in Japan, marking the world's inaugural delivery of a civilian ton-class eVTOL aircraft. The five-seater Prosperity aircraft was handed over to the customer, a pioneering Advanced Air Mobility (AAM) operator in Japan. The operator, to be identified in due course, is currently developing plans for demonstration eVTOL flights at the 2025 Osaka World Expo, as well as a wider AAM rollout in Japan.

In another recent milestone for the eVTOL innovator, AutoFlight's CarryAll aircraft, the cargo variant of Prosperity, obtained Type Certification (TC) from the Civil Aviation Administration of China (CAAC) on March 22, 2024. This marks the world's first eVTOL aircraft above one ton to have been awarded type certification.

Tian Yu, founder and co-chairman of AutoFlight,

said: "The official delivery of the first Prosperity to a customer signifies a new chapter for AutoFlight as we begin to ship our innovative electric aircraft to global markets. Additionally, on the cargo side the receipt of orders for over 200 CarryAll planes already demonstrates a very strong market demand for our products."

The recent CarryAll orders include 30 units for ZTO Express, a NYSE and HKEX dual-listed company and one of the world's largest logistics companies. Referring to CarryAll receiving Type Certification from the Civil Aviation Administration of China, Mr Tian said: "Successfully completing this certification was a lengthy and extremely rigorous process and I would like to thank the review team and all my colleagues for their painstaking efforts. This achievement establishes a robust foundation for AutoFlight's forthcoming large-scale commercial operations."

Securing TC airworthiness certification is vital for ensuring the safety and market entry of the aircraft for commercial operations. The CarryAll, with a maximum take-off weight of 2 tons, operates autonomously and on electric power. Its compliance verification encompassed various aspects, including performance control, stability, lift/thrust system, structural strength/composite blades, battery system, avionics system, electrical system, and flight performance. The thorough review process involved manufacturing compliance inspections and the witnessing of 46 major compliance verification tests at the equipment level, system level and structural component level. Additionally, the CarryAll airworthiness certification prototype completed eight major compliance tests, including plateau performance, data link and ground station functions, involving 156 flights and exceeding a total flight distance of 10,000 kms.

THALES, PRESAGIS, UNIVERSITE LAVAL COMBINE THEIR EXPERTISE TO INCREASE AUTONOMY IN ADVANCED AIR MOBILITY SOLUTIONS



The Consortium for Research and Innovation in Aerospace in Quebec (CRIAQ) is pleased to announce the latest progress on its Autonomy of Future Air Mobility (AMAF) project with Thales, Presagis (now TXT) and Université Laval. The purpose of this project is to structure the increasing autonomy of vehicles involved in advanced air mobility, a fast-growing segment of the aerospace market that is attracting very high levels of R&D investments worldwide. Over the last 40 years, aircraft have become increasingly reliant on automated functions to simplify tasks for aircrew and improve flight safety, but new forms of mobility such as future air taxis and fully autonomous drones herald the arrival of a new paradigm.

To meet this new challenge, AMAF project partners Thales and Presagis (now TXT) are combining their expertise in digital technologies, AI, critical systems and simulation to design the components needed for the autonomous aerospace of the future.

"Future air mobility is one of CRIAQ's three strategic pillars, and the growth of this sector has multiple implications in terms of safety and regulatory compliance, and above all in terms of social acceptability. The AMAF project addresses all these issues, and I'm very pleased with the progress it is making and optimistic about the technological breakthroughs it could deliver." – Alain Aubertin, President and CEO of CRIAQ.

The aim of the Autonomy of Future Air Mobility

(AMAF) project is to propose a structured framework for the autonomy of new regional and urban air mobility solutions in Quebec through two complementary approaches. Capitalising on Quebec's vibrant technological ecosystem, the project partners intend to establish the province's role as a world-class hub for digital aviation systems. TXT will create a digital twin of the airspace environment to support real-world implementation of innovative perception and navigation functions developed as part of this project, and to provide training for users of these new systems. Further expanding the company's expertise in this field, a virtual test bench will be created to analyse interactions between the real world and an entirely simulated environment.

The key innovation goal of the project is to develop and test the solutions needed for an air vehicle to fly safely and fully autonomously along a previously unannounced flight path. Challenges include real-time flight path optimisation, continuous verification of flight path safety and security, and calculation of all the alternative routes that could be taken should unforeseen circumstances arise. These capabilities were demonstrated at the Unmanned Aerial System Centre of Excellence (Centre d'Excellence sur les Drones - CED) test facility in Canada during trials conducted in late 2023 with a UAV provided by Thales for the purposes of this project.

Drawing on the combined expertise of Université Laval and Thales, a new mission planning tool has also been developed to optimise energy use by hybrid aircraft. This type of solution will be crucial for the large-scale rollout of new hybrid and all-electric forms of mobility.

"Quebec and its innovation ecosystem offer ideal conditions for testing the air mobility solutions of the future. Thales is able to rely on an excellent local physical and digital infrastructure to develop green autonomy solutions, working with Quebec-based academic partners, companies and start-ups to test and validate the first technological and functional capabilities." – Siegfried Usal, President and General Manager of Thales Digital Solutions in Quebec.

"Thanks to the AMAF project and constructive Franco-Canadian collaboration, we have succeeded in combining certified critical avionics with the latest advances in AI for the first time. By harnessing the best of both worlds, we're paving the way for truly autonomous and safe flight operations." – Pierre Mariani, Head of Innovation, Flight Avionics, Thales.

The two-year AMAF project encompasses a range of activities including test operations, conferences, scientific seminars and participation in international trade fairs focusing on future air mobility.

GA-ASI MOJAVE LIGHTS UP THE YUMA DESERT IN LIVE-FIRE DEMO



General Atomics Aeronautical Systems, Inc. (GA-ASI) confirms that its Mojave Unmanned Aircraft System (UAS) destroyed static targets in live-fire tests on April 13, 2024, validating the system's battlefield relevance and recording another milestone for the demonstrator aircraft.

GA-ASI partnered with Dillon Aero to mount two of Dillon's DAP-6 Gun Pod Systems onto the Mojave aircraft. Mojave performed seven passes across two flights during the demonstration, expending around 10,000 rounds of ammunition as the UAS shredded a variety of targets.

"Seeing our Mojave perform this live-fire demo really emphasizes the versatility of the Mojave UAS and what it can do," said GA-ASI President David R. Alexander. "Mojave has the ability to act as a sensor, shooter, and sustainer while mitigating threat environments and vulnerabilities and safeguarding human lives."

Mojave and its short takeoff and landing (STOL) capability has built significant interest in the military and aerospace communities. Mojave is unique: a UAS with significant payload capacity that can perform in areas once considered unsuitable for UAS operations. Its ability to take off and land from unimproved landing sites at short distances as well as operate from aircraft carriers - as it did in November 2023 as part of a demonstration with the United Kingdom's Royal Navy - is capturing imaginations and changing expectations about how large unmanned systems can be used.

The live-fire demonstration took place at Yuma Proving Ground, Arizona, and was funded via GA-ASI's internal research and development budget. The Mojave technical demonstrator shares common systems and components with GA-ASI's modernized Gray Eagle 25M, effectively providing an expeditionary Gray Eagle STOL capability. In addition to a wing kit option for Gray Eagle, GA-ASI is planning one for the larger MQ-9B aircraft, which includes SkyGuardian® and SeaGuardian® models.

AV Enters Teaming Agreement with Parry Labs to Develop Modular Next-Gen LRR UAS



AeroVironment (AV) has entered into an exclusive teaming agreement with Parry Labs, a leader in Modular Open Systems Approach (MOSA), to architect, develop, deliver and integrate digital engineering, software, and mission system hardware into AV's upcoming P550 uncrewed aircraft system (UAS), purpose built for the U.S. Army's Long Range Reconnaissance (LRR) program.

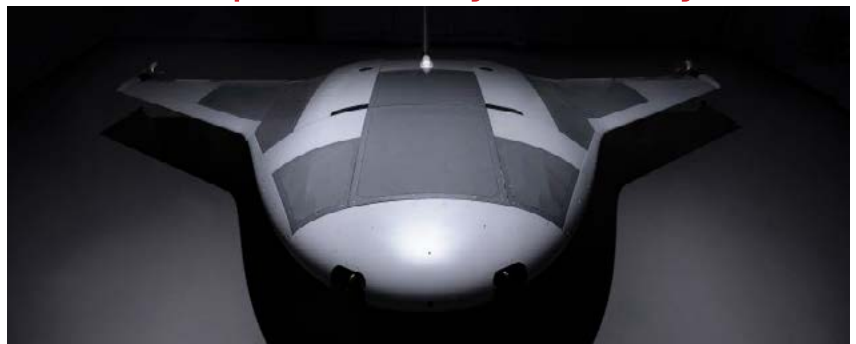
Parry Labs' team of MOSA leaders and digital systems experts have created a foundational platform using an open and intelligent software stack, SWaP-C optimized hardware, and a digital engineering environment for collaborative build, test and integration. Designed with MOSA principals from inception, AV's P550 UAS is perfectly aligned to adopt solutions from trusted partners such as Parry Labs to maximize warfighter capability and mission flexibility.

"Our customers rely on AV's market-leading UAS to perform critical missions in challenging and hostile environments, while offering a verified and validated MOSA architecture from both software and hardware standpoints in order to eliminate vendor lock," said AV's Vice President of Engineering, Cris Saper. "By teaming with Parry Labs, our valued P550 customers can expect a truly open system architecture that will have predefined Major System Components with validated open interfaces for quick, seamless replacement as needed."

"We are excited to partner with AV to bring the benefits of MOSA to the enterprise," said Parry Labs Chief Technology Officer, Dave Walsh. "Using an open systems approach on P550 provides the U.S. Army's Uncrewed Aircraft Systems and Aviation offices reusable and portable infrastructure and capabilities, giving them the opportunity for fast and secure upgrades across programs and platforms."

AV's MOSA-enabled P550 UAS is purpose built for long range reconnaissance missions and features advanced AI and autonomy, maximum payload versatility, and rapid employment capabilities.

NGC Completes Assembly of Manta Ray UUV



Northrop Grumman Corporation completed assembly of a full-size uncrewed underwater vehicle (UUV) prototype known as Manta Ray. A new class of UUV, it is an extra-large glider that will operate long-duration, long-range and payload-capable undersea missions without need for on-site human logistics.

Manta Ray was built through a Defense Advanced Research Projects Agency (DARPA) program aimed at advancing key technologies to benefit future UUV designs, including techniques to manage energy, increased payload capacity, low-power propulsion and more.

Ghost Shark Debuts in Australia



Anduril, the Royal Australian Navy (RAN), the Advanced Strategic Capabilities Accelerator (ASCA) and Defence Science and Technology Group (DSTG) are pleased to unveil the first Ghost Shark manufactured prototype and announce that the Ghost Shark program is ahead of schedule and on budget. As Anduril moves to deliver an operationally relevant capability within a fraction of traditional defence timelines, early creation and testing of the first Ghost Shark has been critical for rapid learning and iteration.

It's a momentous advancement in the \$140M co-development contract between RAN, DSTG and Anduril to design and develop the three 'Ghost Shark' extra-large autonomous undersea vehicles (XL-AUV) in three years in Australia. Ghost Shark is a modular, multi-purpose capability that can flexibly respond to the Australian Defence Force's mission requirements, creating an agile force multiplier for Defence.

David Goodrich OAM, Executive Chairman and CEO Anduril Australia said: "The timeline we set to design and produce three Ghost Sharks in three years in Australia, by Australians for the ADF, was extremely ambitious. I am excited to report that we are ahead of schedule and, importantly for a Defence program, we are on budget.

"We're moving incredibly quickly on this program in lockstep with our ASCA, DSTG and the RAN partners. The strategic leadership and innovation insights provided by Prof Tanya Monro, Prof Emily Hilder and Vice Admiral Mark Hammond are key to our success," said Mr Goodrich.

Dr Shane Arnott, Senior Vice President Engineering, Anduril Industries said: "Moving at the speed of relevance is Anduril's signature. For Ghost Shark, we have assembled a unique high-powered engineering team of 121 people from the best-of-Australia, across tech, resources and defence, to fuel this progress.

"We have 42 Australian companies currently working on Ghost Shark, which is being designed, engineered and manufactured in Australia. We plan to manufacture at scale in Australia for the Royal Australian Navy, and then for export to our allies and partners around the world.

"Using novel scaled agile development techniques, we are combining both tech and defence sector development practices - and it's paying big dividends. Ghost Shark is a program that we as Australians can be very proud of," said Dr Arnott.

RHEINMETALL TO SUPPLY JAPAN WITH ITS 1ST FLEET OF AUTONOMOUS VEHICLES



Rheinmetall paves the way for autonomous Unmanned Ground Vehicles (UGVs) in Japan after being awarded a multimillion-dollar contract on behalf of the Japanese Ministry of Defence. The Rheinmetall Mission Master SP UGVs are expected to be delivered early next year for testing. These compact, low-signature electric UGVs will each be equipped with different payload modules, including cargo, surveillance and a remote-controlled weapon station. The contract also includes a long-term support and training program, as well as spare parts.

Rheinmetall will deliver the UGVs in collaboration with the prime contractor Marubeni Aerospace, a major Japanese business conglomerate that will be trained by Rheinmetall to offer local support to the Japan Ground Self-Defense Force.

The Rheinmetall Mission Master SP is a fully electric, compact UGV that is designed to autonomously carry out missions such as forward and last mile resupply missions, silent watch operations, and carriage of light payloads, including section sensors and weapon systems. The vehicle can be towed or deployed by parachute to carry out missions in hard-to-reach terrain, and fitted with tracks to enhance mobility in deep snow and mud—an ideal feature for countries with extreme climates like Japan.

The Mission Master SP was the first UGV to be developed by Rheinmetall Canada in 2017 and has since been deployed during multiple live military exercises by land forces, including the German, USA, Royal Dutch, and Polish armies. Various NATO partners, such as the UK and the USA have also acquired this UGV.

Autonomous solutions for the modern battlefield : Like other platforms in the Rheinmetall Mission Master family, the SP vehicle is driven by Rheinmetall PATH: an AI-powered navigation system that can be installed on any vehicle. This agnostic suite of advanced sensors and perception algorithms enables the Mission Master vehicles to navigate autonomously through challenging environments.

"As international tensions continue to rise, more and more countries are seeking autonomous solutions to maintain a competitive advantage and prepare for the modern battlefield. Our Mission Master vehicles equipped with our PATH A-kit have performed well in numerous international trials in recent years. These experiences have allowed us to refine our technology and become an internationally renowned centre of excellence for UGVs" recounts Pietro Mazzei, President and CEO at Rheinmetall Canada.

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Drones World Editor
Kartikeya in conversation with

Mr. Jajati Mohanty
CEO of Schiebel India



Q Can you provide insights into the strategic significance of the Camcopter S-100 unmanned aircraft system in enhancing the capabilities of the Indian Armed Forces?

A In 2022 a Request for Information (RFI) was issued to facilitate the Indian Navy's acquisition of forty Naval Shipborne Unmanned Air Systems (NSUAS). In the RFI, the Indian Ministry of Defence (MoD) and the Indian Navy stated that the NSUAS will be used extensively for surveillance missions, signals intelligence (SIGINT), target acquisition, reconnaissance, and maritime domain awareness around a naval task group. Secondary roles include anti-piracy measures, anti-terrorist activities, and search-and-rescue

support.

The CAMCOPTER® S-100 has been placed in active service by the Indian Navy, marking a noteworthy advancement in the modernisation of its naval capabilities. The system represents a significant step in naval innovation and supports the country's aspiration to incorporate state-of-the-art technologies in the IOR where unmanned systems would be the order of the day. Taking cue from the Navy the other sister services have also commenced study towards utilisation of the S-100 in their concept of operations.

Q What specific operational requirements of the Indian Armed Forces does the Camcopter S-100 address, and how does it contribute to the overall defense

preparedness?

A The Indian Navy has been undertaking ISR in the IOR (Indian Ocean Region) with unmanned systems since the beginning of the 21st century using fixed wing UAVs operated from shore as well as ships by handing over control to ships at sea. The exploitation of the MALE UAVs has provided a vital and crucial experience to the Indian Navy and they are now looking to foray into shipborne tactical UAVs. These deck-based rotary UAVs provide more tactical leeway to the fleet and the warships in local ISR (Intelligence Surveillance & Reconnaissance) as well as closer air cover to fleet warships. Combat air patrol by the deck based rotary UAVs will become the new normal.

Q In what ways do you anticipate the Camcopter S-100 impacting the surveillance and reconnaissance capabilities of the Indian Armed Forces, especially in challenging terrains, high altitudes and border regions?

A The S-100 is proven to operate effectively and efficiently in extreme environments. Customers routinely employ the S-100 capability in arctic conditions down to -40 degrees Celsius and deserts up to +55 degrees Celsius, as well as in climatic zones of extreme humidity. With its service ceiling of up to 12,000 feet and its endurance exceeding 6 hours with a full fuel load and 34 kg of payload, the UAS is the ideal asset for hard-to-reach areas and challenging terrains.

Q Could you shed light on the key features and advanced technologies incorporated into the Camcopter S-100 that set it apart from other unmanned aerial systems in the market?

A The S-100 can be operated with either aviation gasoline or kerosene (S1 or the S2 engine option), making it ideally suited for the maritime environment. Its small footprint and the absence of launch or recovery equipment lets the S-100 be easily maneuvered, stowed

and maintained in confined spaces or in ships' hangars. Extensive use of carbon fibre composite materials, titanium, stainless steel and special coatings protect the system against corrosion. Operation is possible from any ship with a small helicopter landing deck or suitable clear space, even in challenging weather.

The S-100 can also successfully operate in environments where GPS is not available (or denied), with missions planned and controlled using a simple point-and-click user interface. Its carbon fibre and titanium fuselage provide capacity for a wide range of payload/endurance combinations up to a service ceiling of 5,500 m / 12,000 ft. The high-tech unmanned helicopter is supported by Schiebel's excellent customer and training services.

Q How has the collaboration between Schiebel Systems India and VEM Technologies evolved in delivering a tailored solution to meet the specific needs of the Indian Armed Forces?

A Schiebel Systems India and VEM Technologies had showcased the CAMCOPTER® S-100 Unmanned Aircraft System (UAS) featuring the script of the Indian Navy and the roundel of India on the airframe at Aero India 2023 in Bengaluru.

Subsequently, Schiebel India and local firm VEM Technologies have joined hands for the production of CAMCOPTER® S-100 in India wherein the complete assembly, integration and testing (licensed production) is now happening within the country at Hyderabad and in addition Schiebel India is also setting up an state of the art MRO facility to maintain these assets for the next 10-15 years as mandated by the Indian Navy.

Q With the increasing focus on indigenous defense manufacturing, how much of the Camcopter S-100 is manufactured locally, and what are the prospects for further localization in the future?

A Schiebel has set up an office in India and



partnered with VEM Technologies for the local production of the CAMCOPTER® S-100. This partnership is manufacturing the CAMCOPTER® S-100 along with its payload under the Buy (Indian) category with up to 60% indigenisation content. The endeavor would be to create necessary skills for integration and testing in India (licensed production), creation of a robust eco-system consisting of component manufacturer, dealers for off the shelf items and also setting up of the MRO with indigenized tests stands and diagnostic testers towards fault detection and rectification in addition to overhauling and testing. The creation of facility and skills in India would be to sustain the platform for 15 years and above based on the technology obsolescence.

Q What training and support infrastructure are being provided to the Indian Armed Forces for the effective utilization of the Camcopter S-100, and how is technology transfer being managed in this collaboration?

A Complete training to Indian Navy personnel was undertaken within the country so that the trained personnel would be available immediately for operational

availability with the Navy. This activity was undertaken jointly by Schiebel and utilizing the training facilities of the Navy which provided crucial inputs to the Navy regarding future sustenance of skills and experience as the S-100 matures in the naval operations. The Navy has been trained to undertake all front line maintenance related activities and the OEM managing the overhauls and depot level maintenance. Under this condition, the programme ensures operational and maintenance skills within the Navy as well as creation of an eco-system in the industry to manage the S-100 for the next 10-15 years. Necessary training aids and data have been provided to Navy to sustain training activities for the future crew.

Q As a defense correspondent, I'm interested in understanding the broader implications of this unmanned aircraft system sale for India's defense capabilities. How does it align with the country's broader defense strategy and modernization goals?

A The use of unmanned systems falls into three major categories namely Strategic level - where the MALE and HALEs are important, Tactical level - where VTOL unmanned systems come into picture and where the S-100 has been the market leader since the last 15 years for rotary based systems and Ground level - where the mini and micro unmanned systems are required. Availability of a tactical unmanned system for a surface combatant / naval warship is a huge capability bolster where the surface tactical picture gets enhanced for suitable decision making at ship / fleet level. This enhancement is in total agreement with the nation's broader strategy to monitor & manage IOR where we are seeing growth of piracy and other non-linear actors. Rotary tactical unmanned system is a major capability booster and will enhance the ability of



the ships deployed in the IOR, providing them with better maritime domain awareness and crucial capability for littoral operations.

Q What are the key technological advancements and improvements introduced in the new Camcopter S-300 compared to its predecessor, the S-100?

A The CAMCOPTER® S-300 UAS - the bigger brother of the S-100 - is 4.8 meters long, 1.9 meter high and 0.9 meter wide. It can fly at a maximum speed of 220 km/h (cruising speed 100 km/h). The S-300 is able to carry up to 340 kg (including fuel) and its maximum take-off weight can reach 660 kg. It can fly up to 24 hours with a 50 kg payload (or 4 hours with 250 kg). The ground component, including the control system for the S-300, will be the same as for the S-100 version. This in turn means, that by using a single control system, it will be possible to select the S-100 or S-300 platform according to the needs and tasks to be carried out. Ships or other platforms adapted for operation with the S-100 will be ready for immediate interoperability with the S-300 version, without any additional work on the communication and control systems.

Q Given the increasing importance of cybersecurity in military operations, what measures have been implemented in

the Camcopter S-300 to ensure the system's resilience against cyber threats?

A In terms of anti-jamming, the experience with the OSCE Special Monitoring Mission in Ukraine between 2014 and 2022, which led Schiebel to implement techniques and procedures in order to keep the systems operational in spite of powerful jammers used by the Russian Army. The monitoring missions provided many opportunities for the anti-jamming system to be utilised, tuned, upgraded and modified in the process of creating a very robust and strong system capable of handling anti-jamming situations.

Q How do you see the growth of Schiebel India in next 2-3 years?

A We see Schiebel growing along with the Navy in the maritime domain with Coast Guard too following close behind since they too have requirement for these kind of capability. In fact, we have a large no of Coast Guard customers around the world who are effectively exploiting this system for shore & sea based patrols and search & rescue at sea. S-100 is also suitable for various land-based operations and we are working potential customers for induction into Army and Air Force. Further, oil & gas has also shown huge potential towards utilization of this asset for ISR and logistics. Hence we feel that Schiebel is slated for substantial growth in the coming few years.

EELUME PARTNERS WITH EXAIL TO EQUIP ALL-TERRAIN AUVS WITH ADVANCED NAVIGATION SYSTEMS

Exail, a global leader in subsea navigation, has been selected by Eelume, a leading provider of innovative underwater technology solutions, to supply its Phins Compact C3 Inertial Navigation System (INS) for Eelume's new S-Series all-terrain Autonomous Underwater Vehicles (AUVs).

The Eelume S-Series is a new generation of all-terrain AUVs specifically designed for mapping and operating in challenging underwater terrains. Unlike traditional AUVs, they boast 360° of maneuverability in roll and pitch, offering versatility and sustainability in accessing previously unreachable environments.

Providing highly accurate and robust navigation data, the Phins Compact C3 INS will enhance Eelume AUVs' capabilities for efficient exploration, inspection, and monitoring in complex environments such as hillsides, under-ice areas, vessels, and harbors. Its compact OEM form



factor will ensure easy integration into the AUVs, facilitating swift deployment and streamlining operations.

"We required a compact navigation system

aligned with our eco-friendly approach, delivering unparalleled navigational accuracy and agility to conduct missions in intricate underwater terrains efficiently. Exail's Phins Compact C3 INS checks all the boxes," said Thomas Nygaard, CEO of Eelume. "Thanks to this collaboration, our versatile AUVs paired with the Phins Compact C3 are set to totally change the game for underwater exploration."

"We are grateful to Eelume for choosing our Phins Compact C3 INS for their latest AUV. It's been rewarding to contribute to the development of such an innovative vehicle," commented Quentin Chiche, Regional Sales Manager at Exail. "This partnership underscores Exail's ability to deliver high-performance INS customized for next-generation AUVs. It also highlights our commitment to advancing underwater navigation technology by supporting our clients' innovations and fostering a culture of technological progress and collaboration."

RACER SPEEDS INTO A SECOND PHASE WITH ROBOTIC FLEET EXPANSION AND ANOTHER EXPERIMENT SUCCESS

DARPA's Robotic Autonomy in Complex Environments with Resiliency (RACER) program successfully tested autonomous movement on a new, much larger fleet vehicle - a significant step in scaling up the adaptability and capability of the underlying RACER algorithms.

The RACER Heavy Platform (RHP) vehicles are 12-ton, 20-foot-long, skid-steer tracked vehicles - similar in size to forthcoming robotic and optionally manned combat/fighting vehicles. The RHPs complement the 2-ton, 11-foot-long, Ackermann-steered, wheeled RACER Fleet Vehicles (RFVs) already in use.

"Having two radically different types of vehicles helps us advance towards RACER's goal of platform agnostic autonomy in complex, mission-relevant off-road environments that are significantly more unpredictable than on-road conditions," said Stuart Young, RACER program manager.

"For Phase 2, adding the combat-scale RHP robot supports porting and performance demonstration of RACER autonomy stacks at multiple scales concurrently while moving



between highly varied terrains."

RACER's second phase began last fall with its fourth experiment ("E4"), which included first testing of RHPs and testing on RFVs by teams from the University of Washington and from NASA's Jet Propulsion Laboratory. RACER is on pace to continue its autonomy development and experiment spirals with a new round of development and testing roughly every six months.

"Our Phase 2 off-road average autonomous speed goals are higher at lower intervention rates, and both RFVs plus now RHPs allow RACER to also show adaptability and resiliency of autonomous software at multiple, platform-agnostic ground robot scales in an array of

complex, military-relevant environments," Young said. "As we also add tactics-based autonomy, we see all of these together as vitally important to Army and Marine needs in robotic vehicle programs of record that are closely tracking RACER, and which represent possible transition opportunities for the program."

"RACER's early Phase 2 activities, both with Experiment 4 performance successes in difficult, new-to-the-program, military relevant terrain in Texas, as well as recent incorporation of RHP as a fleet platform is setting the tone for the program to achieve tougher autonomous maneuver goals while showing autonomy resiliency and adaptability to new environments on any robot at any scale," said Young.

NGC Expands Australia MQ-4C Triton Support Team



Northrop Grumman Australia has signed a contract with L3Harris Corporation (L3HCA) for the operation and maintenance of command-and-control systems aboard Australia's MQ-4C Triton multi-intelligence uncrewed aircraft fleet. The collaboration is another milestone in advance of delivery of the platform to the Royal Australian Air Force (RAAF).

As prime systems integrator on Triton, Northrop Grumman has collaborated with several suppliers to integrate and maintain key systems and technologies on the platform to provide the capabilities required by the RAAF.

The Interim Sustainment Support Contract covers maintenance of the Triton's Wideband Command, Control and Communications (C3) Subsystem, which was developed by L3HCA.

Starting this month, L3HCA will provide seven communications technicians and field service representatives to work with the Northrop Grumman team.

Experts: Christine Zeitz, chief executive and general manager, Australia & New Zealand, Northrop Grumman: "L3Harris will support Triton's wideband C3 functionality as we work collectively to deliver next-generation technology solutions that will help keep Australia safe."

Andrew Rushbrook, managing director, L3Harris Communications Australia Pty Ltd, and regional vice president, L3Harris Tactical Communications: "L3Harris is delighted to be working with Northrop Grumman Australia to deliver this critical capability to the Commonwealth. Our wideband C3 solution for Australia's MQ-4C Triton will help establish a world-class sovereign capability."

Red Cat Announces Agreement with Sentien Robotics UAS Hive for Land, Air and Sea Drone Swarming Operations



Red Cat Holdings, Inc. a drone technology company integrating robotic hardware and software for military, government, and commercial operations, announces a partnership with Sentien Robotics, a leader in autonomous drone fleet logistics. The partnership will enable organizations using Sentien's Hive UAS management platforms to deploy Teal Drones as part of a larger autonomous drone swarming strategy for mobile and fixed-position land, air, and sea defense and security operations.

The partnership between Red Cat and Sentien Robotics will enable the companies to provide warfighters with the ability for continuous uninterrupted reconnaissance on enemy targets with drone swarms. Red Cat's Teal Drones recently successfully passed electronic warfare (EW) testing in Ukraine against some of the most powerful EW counter UAV technology, and these battlefield-tested drones, coupled with Sentien's fleet handling capabilities, give warfighters tools and technology they have never had access to before.

"New technology is dramatically changing the nature of warfare, and those who can integrate defensive and offensive assets across multiple domains and rapidly deploy those capabilities against adversarial targets will gain tactical superiority," said George Matus, Red Cat CTO. "This agreement with Sentien is a major step toward the autonomous deployment and control of drone swarms from anywhere that can map, surveil and neutralize targets where speed of data and lethal response across a network of connected systems are critical to modern combat teams."

Red Cat's agreement with Sentien Robotics and integration with its Hive-Expedition and Hive-XL automated UAS fleet transport and launch vehicles adds to its robust tactical ecosystem of partnerships with leading companies to provide the best solutions to clients for their tactical missions. Other Red Cat hardware and software partners include Ocean Power Technologies, Primordial Labs, Tomahawk Robotics, Athena AI, Teledyne FLIR, Reveal Technology, Immervision, and Doodle Labs, which enable capabilities such as computer vision, AI, and third-party apps.

"Our goal with the Hive ecosystem is to enable a continuous, mission ready UAS presence from a single hub where a single operator can deploy and control drones from anywhere," said Brandon Borko, Sentien Robotics CEO. "We want to provide rapidly scalable drone service areas that can be deployed to critical locations such as security and disaster relief sites. In the future you won't find a person behind a controller for every single drone. You're going to have fleets of drones performing tasks, supporting humans on the ground, and they will all be flown from ground automation hardware like the Hive."

Red Cat subsidiary Teal Drones builds its Teal 2 drone solutions, designed to support U.S. and allied military operations, public safety organizations, and government agencies, at its South Salt Lake facility. Teal 2 is a cost-effective, man-portable sUAS designed to "Dominate the Night™" that has best-in-class night vision, multi-vehicle control support, and a fully modular design. It is both Blue UAS Certified and FAA Remote ID approved.

Sentien Robotics developed the Hive to automate all facets of UAS operation. The Hive features robotics automation hardware and intelligence software to enable operations of fleets of UAS with the vision of reducing manpower, improving safety, and vastly improving performance over traditional UAS operations. The Hive enables new capabilities not available to tethered or ground launched UAS systems. The Hive Expedition and Hive-XL are fully automated UAS fleet management platforms that support multiple drones and provide automated launch, recovery, recharging capability, data download, precision landing, and storage.

KONGSBERG SIGNS “CERTIFICATE OF DELIVERY AND ACCEPTANCE” WITH FOR 2ND HUGIN SUPERIOR AUV

Ocean surveying and inspection specialist Argeo Subsea, CSI Nordics and Kongsberg Discovery (KONGSBERG) have signed a three-party Certificate of Delivery and Acceptance for a new HUGIN Superior AUV. The agreement, confirmed at Oceanology International in London, supports Argeo’s ambitious fleet expansion plans, as the firm looks to build the world’s most advanced AUV fleet, with seven high specification units. Argeo already has one HUGIN Superior in service.

Integrated excellence

Argeo CEO Trond Crantz says the deal will amplify the company’s operational capacity, putting it in “a unique position within both the marine minerals, oil and gas and the renewables segment, increasing efficiency and productivity substantially.”

He comments: “Our expansion plans will establish us as the premier authority in AUV technology worldwide. The strategic combination of Kongsberg’s highly advanced AUVs with



Argeo’s proprietary cutting-edge electromagnetic sensor system, Argeo LISTEN, propels us ahead of competitors.

“Argeo LISTEN allows for efficient inspection of cables and pipelines, both buried and on seafloor, as well as rapid estimation of cathodic protection status and remaining lifetime. By integrating this state-of-the-art system into the Hugin Superior, our clients can expect expedited project completion and access to comprehensive data derived from multiple sensors concurrently, ensuring unparalleled quality and efficiency.”

Competitive advantage

Stene Førsund, EVP, Kongsberg Discovery, says: “We’re delighted to be consolidating our relationship with Argeo and CSI, with the leasing of this advanced, high specification technology.

“With their second HUGIN Superior onboard they’ll be able to offer clients excellence in high-resolution seabed mapping and imaging, with the functionality needed for a broad range of applications, and the precision and reliability to go further, deeper and into more detail on missions, delivering powerful competitive advantage. Argeo can look forward to achieving some Superior results in the very near future.”

In addition to the Superior, the HUGIN family of AUVs includes a variety of models customised to meet diverse markets, budgets and operational flexibility. This includes the HUGIN Endurance, capable of conducting missions over a range of 1,200 nautical miles, and the soon-to-launch HUGIN Edge, weighing only 300kg and less than 4m in length.

AV Unveils New AI Capability and Autonomy Kit for Unmanned Systems

AeroVironment (AV) has introduced its Autonomy Retrofit Kit (ARK) and AVACORE software demonstrating the company’s commitment to advancing autonomy and machine learning capabilities to increase effectiveness of autonomous systems and reduce operator burdens. ARK and AVACORE bring AV’s accelerated autonomy to fielded assets such as Puma™ 3 AE and Puma™ LE, in addition to future autonomous systems.

ARK is a quick-connect payload introducing a new suite of intelligent mission capabilities for Group 1+ unmanned aircraft systems (UAS). Providing edge computing for mission-critical applications, ARK enables operators to task a single or multi-vehicle team with mission objectives for fully autonomous execution while operating in communications-contested environments. ARK also intelligently integrates with distributed groups of dismounted units in a Mobile Ad Hoc Network (MANET) using the Android Team Awareness Kit (ATAK).

AVACORE is AV’s autonomy software providing an open framework for unmanned



systems. It features a modular set of interfaces such as autopilots, radios and sensors, and supports rapid integration with new platforms and applications. ARK also comes preinstalled with SPOTR-Edge, AV’s computer vision software, for onboard detection, classification, localization, and tracking of operationally relevant objects including people, vehicles, aircraft, and maritime vessels, day or night.

“ARK and AVACORE provide enhanced capabilities and critical advantages to warfighters on complex battlefields,” said AV’s Senior Vice President of MacCready Works, Jeff Rodrian. “This payload combines AV’s unparalleled autonomy and field-proven computer vision SPOTR-Edge to accelerate awareness and mission success.”

Through the combination of autonomy and computer vision, ARK and AVACORE allow operators to select a wide variety of single or multi-agent capabilities including multi-region search, track and follow and more. The introduction of these systems builds upon AV’s proven and trusted family of autonomous systems, bringing a scalable, adaptable AI toolset to fielded and new assets for safer, smarter mission capabilities.

“AVACORE features an intuitive behavior tree approach allowing flexibility for rapid development and adoption of new autonomous missions,” continued Rodrian. “This results in smarter systems with reduced cognitive load for warfighters.”

New Diamond DA62 MPP SurveyStar for the RIEGL Test Aircraft Fleet



The new DA62 MPP SurveyStar has been delivered by Diamond Aircraft Austria to RIEGL Laser Measurement Systems and it will be immediately implemented for test and calibration flights.

RIEGL and Diamond Aircraft Austria have been collaborating for almost 20 years. Since 2007, RIEGL has owned and operated the proven DA42 MPP GeoStar, which has successfully completed all missions to date with the utmost satisfaction. The increased requirements in recent years have now made it necessary to “upgrade” to the new DA62 MPP SurveyStar.

The new DA62 MPP SurveyStar involved close collaboration between RIEGL and Diamond Aircraft in order to professionally integrate and efficiently utilize the entire RIEGL sensor and system portfolio.

Markus Fischer, Diamond Aircraft, Director Special Mission Aircraft Division: „It is a great privilege to have perhaps the world’s most innovative manufacturer of airborne laser scanners as a partner and customer and to develop an optimal solution together with them. It was a very special pleasure for me to be able to hand over the aircraft and I wish RIEGL much joy and many years of successful use of the DA62 MPP SurveyStar.“

Dr. Johannes Riegl, RIEGL CEO and an enthusiastic pilot himself: “The DA62 Survey Star is exactly the right choice to keep us at the cutting edge of technology in the field of airborne applications for many years to come. And one thing I can already say after the first flights with our new aircraft: it is a real pleasure to fly it!”

SI Imaging Services is Preparing World’s Highest Res EO Satellite



SI Imaging Services (SIIS) in collaboration with its parent company Satrec Initiative, is preparing for the launch of a 100% commercial optical satellite with ultra-high resolution.

SIIS aims to innovate the domestic and international satellite data market by venturing into ultra-high-resolution (30cm) SpaceEye-T imagery in 2025, in addition to providing KOMPSAT imagery.

SpaceEye-T is entirely funded and manufactured by its mother company Satrec Initiative (SI) and will be operated by SIIS.

SpaceEye-T, the world’s highest-performance Earth observation optical satellite, is capable of distinguishing objects as small as 30cm on the Earth’s surface from about 600km altitude.

BEZOS EARTH FUND ANNOUNCES \$100 MILLION FOR AI SOLUTIONS TO TACKLE CLIMATE CHANGE AND NATURE LOSS

The Bezos Earth Fund today unveiled an AI for Climate and Nature Grand Challenge – under which up to \$100 million in grants will be awarded. Its goal is to see how modern AI might help address climate change and nature loss and inspire deeper collaboration between groups on the front line of environmental solutions and leading AI technology providers. Applications open in May 2024.

“Can modern AI help counter climate change and nature loss, and, if so, how? That’s the question we hope to answer,” said Jeff Bezos, Executive Chair of the Fund. “By bringing together brilliant minds across fields, we may be able to invent new ways forward.”

In its first round, the Grand Challenge will advance solutions in three focus areas: sustainable proteins, biodiversity conservation,

and power grid optimization. It will also include a “Wild Card” category for powerful ideas outside the focus areas. Subsequent rounds will address other priorities. Each round will include two funding opportunities. In the first phase, up to 30 seed grants will be awarded for promising AI ideas addressing the focus areas. Awardees will be announced at a Bezos Earth Fund-TED event during Climate Week NYC in late September. In phase two, these awardees will be eligible to apply for grants up to \$2 million to grow their concepts into viable solutions, receiving mentorship, support from technology leaders, and access to computing infrastructure and relevant datasets.

“AI may have the potential to solve some of our biggest problems, and we’re calling on the planet’s brightest problem solvers to bring their visionary ideas to the table,” said Vice Chair Lauren

Sánchez in a video announcement. “Together, we can innovate and solve these challenges.”

The Bezos Earth Fund invites proposals from practitioners, researchers, and innovators in universities, NGOs, private companies, and organizations. It is likely that selected proposals will involve partnerships between organizations addressing climate and nature problems, and organizations bringing AI expertise. Proposals from individuals will not be considered.

Bezos Earth Fund President and CEO Dr. Andrew Steer said, «The future is unlikely to be characterized by straight lines and gentle curves, but rather by unexpected changes and tipping points, good or bad. The arrival of AI will potentially help solve very difficult challenges. With this program we hope to make a helpful contribution.”

NV5 Completes Largest Contiguous Oblique Imagery Collection in US

NV5, the world's leading provider of geospatial software and services, announced that it recently completed the largest single oblique imagery collection in the United States for the Commonwealth of Kentucky. Spanning 40,660 square miles and offering rich detail at three-inch scale, the project is part of the Ky From Above initiative, which makes high-resolution imagery and geospatial data publicly available.

"Working with NV5, we are democratizing access to information that has a real bearing on each Kentuckian's quality of life. This new imagery will enhance public safety, economic development, infrastructure planning, property assessment and other critical efforts across every corner of the Commonwealth," said Kent Anness, Kentucky's geographic information officer. "Some Kentucky counties can afford to acquire their own oblique imagery, but many don't have the resources to do so. This important investment will pay vast dividends by reducing duplicative spending and providing a seamless basemap for everyone. As a result, all communities, regardless of their population or tax base, will have access to the same level of data. Open access to the oblique imagery will finally level the playing field."

Kentucky is the first state to make such detailed oblique imagery available publicly. Through the KyFromAbove portal, everyone has free access to this information, wherever and whenever they need it. Oblique imagery provides high-resolution, multi-angle views of landscapes, crucial for a variety of applications that span traditional county borders. Government agencies can use oblique imagery for tax assessments, urban planning, and infrastructure development, disaster management, enhancing



situational awareness for first responders, improving land use and managing public lands. The imagery is openly available to the public and commercial entities, such as real estate firms examining properties, insurance companies assessing damage, solar companies determining viability of putting panels on homes and businesses, or a hiker who wants to explore a state park trail system.

Setting the Standard for Edge-to-Edge Oblique Imagery : Kentucky selected NV5 to undertake this unprecedented project in 2022. To ensure the best images possible, Kentucky specified that all collections must take place in near-perfect conditions: no leaves on trees, no cloud cover, no snow on the ground or flooding, with a sun angle greater than 30 degrees. NV5 leveraged top-of-the-line Vexcel Osprey 4.1 sensor technology, which acquires photogrammetry-grade nadir (PAN, RGB and NIR) and three-band (RGB) images

in the four cardinal directions to produce oblique imagery at a highly detailed three-inch scale.

Starting in Eastern Kentucky, the first phase of oblique imagery was captured in Fall 2022, with additional phases proceeding to the west completed during optimal conditions through April 2024. Currently oblique imagery from Eastern Kentucky is available via KyFromAbove, with the remainder of the state expected to be made public by Fall 2024.

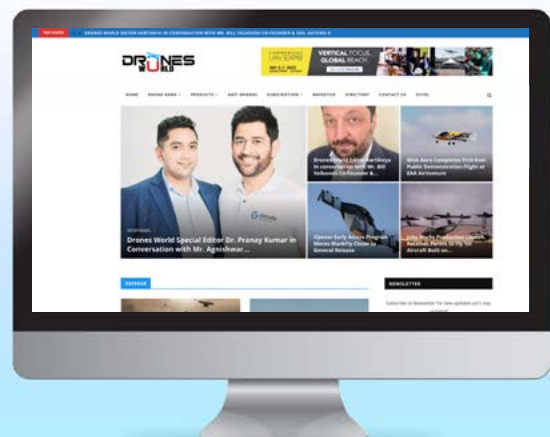
"Kentucky is leading the charge in edge-to-edge oblique imagery acquisition and setting the standards for other jurisdictions seeking to do similar projects in the future," said Chris Holder, senior project manager for NV5. "Such a cohesive collection will save cities and counties tens of thousands of dollars a year, while promoting fact-based decision making on many levels, which will have a positive economic impact throughout the Commonwealth."

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Drones World
Special Editor
Sanjay Singh
In Conversation with

Mr. Dinesh Baluraj
CEO - Yali Aerospace.



Q Can you share with us the inspiration behind founding Yali Aerospace and your vision for the company's role in enhancing healthcare logistics in rural India?

A When I was 12 years old, one day, in the early morning, my mother and I were attending a housewarming function for a relative in a very remote village in Thanjavur, in 2001. Everything in that area was very pleasant, then all of a sudden, I heard a woman in the neighbourhood yelling and sobbing loudly. She has two boys, and one of them was bitten by a snake while he was sleeping. She rushed him to the nearest primary healthcare facility since he was unconscious. Getting him to that clinic took almost an hour. Unfortunately, he passed away before they arrived. After a few hours, she came home with the body of her son and noticed that her other son had also been bitten by the same snake. It's terrible that he also passed away. I felt helpless and sad watching the events unfold. I asked my mom why they couldn't save those two little kids. She said there were no roads going directly to that clinic and there was no ambulance as well. That day, I came to the realization that despite the clinic having a doctor on staff, their lives could not be saved. In order to save our lives, hospitals and doctors rely heavily on technology. Those kids could have been spared if there had been a flying ambulance, right? On that day, I decided to pursue my career in technology towards healthcare

development.

In many rural areas, where citizens rely on primary health centers for primary care, healthcare provision is hampered by frequent stockouts of essential medicines and critical medical supplies. Also in many villages, the provision of medical care is often reliant on poor road conditions and unreliable road networks. These challenges contribute to high rates of snake bite mortality, maternal deaths, lack of blood transfusions, reduces patients' ability to adhere to treatment, and slow improvements to the health system. So, I came up with the concept of "Yali Network Bridge (YNB)".

Q What challenges did you face during the development of the life-saving drone at Yali Aerospace, and how did you overcome them?

A We have faced many challenges including regulatory hurdles, spent a lot of time on rigorous testing to ensure the safety and reliability of the drone since it meant to fly BVLOS all the times, Collaboration with relevant stake holders, and gaining public acceptance and trust in the technology, particularly in sensitive situations like medical emergencies, is essential. But we have managed to overcome from all of them except few with our knowledge and expertise in the same field for more than 10 years

in Europe and Australia.

Q Could you elaborate on the technology and features of the drone landing stations developed by Yali Aerospace and their significance in facilitating medical supply delivery?

A We have developed the drone delivery concept and it works by implementing our hybrid VTOL-fixed wing drone and drone landing station at all of the main government hospitals in India where our drone could take-off, land, switch batteries & payload & store the drone inside of it automatically.

Q As someone deeply involved in UAV flight operations, what do you see as the most promising advancements or trends in drone technology for the near future?

A I see several promising advancements and trends are shaping the future of drone technology including autonomous navigation using AI and obstacle detection & avoidance, improvements in battery technology in India, Swarm Intelligence drones in military, ease of operation in drone light shows and regulatory developments for BVLOS operations.

Q Given your extensive experience in conducting BVLOS flight operations across various countries, what are the key factors to consider in ensuring the safety and efficiency of such operations?

A Conducting BVLOS flight operations is not a simple endeavour for those lack prior knowledge in the field and of course it requires DGCA permission. I recommend to consider the following before doing any BVLOS operation whoever wish to conduct BVLOS operation such as BVLOS flight operation checklist, flight route planning, conduct risk assessment: 'identify potential hazards in the flight route and minimize the risks', get approval from the regulatory body, plan 3D geofence on the entire flight route, enable ADSB-in, redundant flight controller and GPS navigation systems, navigational strobe lights, precision landing system and have experienced BVLOS pilot to conduct the operation.

Q How do you envision the integration of drones into existing healthcare systems, particularly in rural areas, and what are the potential benefits and challenges?

A We are going to make a significant impact in India, particularly by enhancing our health-care system for our citizens. Even during an emergency, the residents of their remote community can readily obtain all of the necessary medical supplies in a short period of time. Following the implementation of our



drone delivery network, the fatality rate will significantly reduce.

The only problem we encounter is the regulatory framework for BVLOS operation. DGCA has to establish the policy soon. Though I have 10 years of BVLOS drone operations in Australia, UK, and African and in European countries still I couldn't conduct one for my people due to the delay of policy.

Q Yali Aerospace's initiative aligns with the broader concept of using drones for humanitarian purposes. Can you share any memorable experiences or success stories where drone technology made a significant impact on healthcare delivery or emergency response?

While I was working on the world's first last mile delivery project in Vanuatu with a German drone company and UNICEF in 2017, I completed continuous drone deliveries 24/7 over a six-month period, covering a maximum distance of 10000 kilometres. I remember the people in the hamlet crying when the project was completed because they have to carry their children again for 8 hours to get the vaccine at the health centre.

Q Looking ahead, what are your future plans and aspirations for Yali Aerospace, and how do you see the company evolving in the coming years within the rapidly evolving drone industry?

A We have five big objectives which are as follows:

- Implement Yali Network Bridge throughout India and other countries
- Each and every person in India can access their medical supplies, blood transfusions, organ transplants, and first aid equipment within their village or city
- Make a zero ratio in India for people dying without accessing medicines, blood, and first aid equipment
- In five years, we make more than 3,50,00,000 people can access medical supplies using our technology
- In 2027, we will launch the Yali Air Ambulance to transport patients who needs critical care from any place to the hospitals, regardless of where they are.

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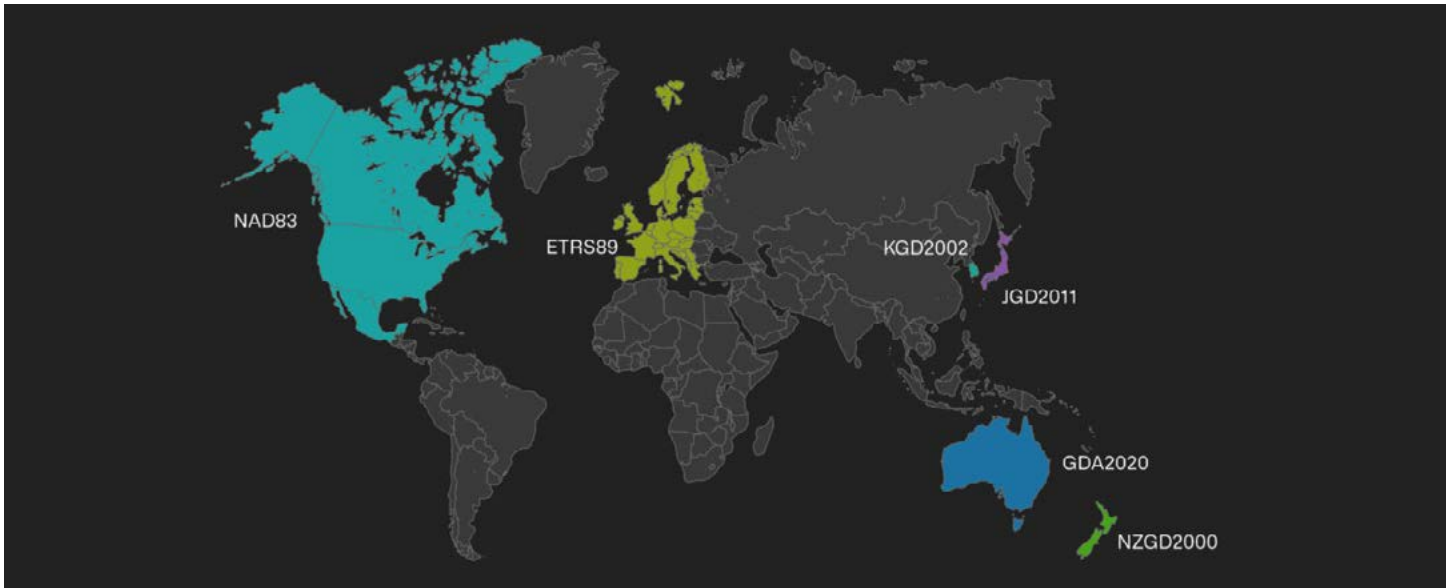
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Point One Brings Effortless Precision to the Survey Market



Polaris is the easiest RTK network to use, the most accurate, the simplest to integrate with, and the only one with a free trial so you can kick the tires before you get started. But – you told us a few obstacles have prevented you from employing Polaris for your use case. Maybe these sound familiar:

You needed the ability to receive corrections in your preferred datum, whether that be NAD83, ETRS89, or KGD2002, for Polaris to work with your hardware and tools.

To move forward, you'd require official support for your survey hardware.

Today, we have solved those challenges by inventing a creative solution to make your life as a product creator or surveyor easier. Keep reading – more on that below.

Struggling with poor UX and setup experiences on GNSS hardware

Many of today's most advanced solutions for precision positioning were developed to serve every possible need without much thought for how customers actually use their product. Unfortunately, this means most corrections services for surveying are difficult to use and require hours of planning and setup.

If you are used to setting up a base station at every job site or location, you know this means carrying around that equipment to every job. And you likely lose hours at every job site configuring and calibrating these base stations.

If you are using a legacy RTK network or CORS networks, you're likely familiar with the process

required to plan every job in advance – finding your closest base station, looking up its mount point and connection credentials, and researching coverage. And then – at every site – configuring your survey equipment for each specific mount point means more time lost setting up and configuring your devices. On top of that, many of these networks are not reliable, requiring on-site adjustments. Even when you can use such a service, you find you're locked into a vendor's proprietary (and often expensive) network, requiring you to configure everything just right to get points in the grid you expect.

These challenges with legacy RTK networks also cause headaches for survey product creators. To deliver survey-grade precision, they've had to work with networks that don't provide direct integration. And supporting a myriad of legacy networks, each with its own degree of accuracy, creates untold numbers of support tickets, explanation requests, and lost time for valuable sales and distribution partners.

There has to be a better way.

Centimeter accuracy that magically works on your devices – in the datum you expect.

Today we're officially launching support for GIS product creators, surveyors, and GIS professionals on the Polaris RTK Network – the most accurate, reliable network out there.

To do this, we've invented automatic assignment of datums and base stations. You connect to a single mount point, one time, and we make sure your devices are referencing the closest base stations and the appropriate local datum.

The best part? We've eliminated all the hassle from setting up, configuring, and using our service with the most common survey devices (with more to come). Here's what you can expect:

Survey-grade precision (cm-accurate) across the United States, European Union, United Kingdom, Australia, New Zealand, and Korea (and growing!)

Connect your survey devices to Polaris in minutes – once and done!

Never look up another mount point/base station again; Connect to a single mount point, and Polaris intelligently assigns you to your closest base station and provides results in the relevant datum for your continent/country.

Support and automatic assignment of either ITRF2014 or local datums including NAD83, ETRS89, NZGD2000, GDA2020, JGD2011, and KGD2002.

Save hours on every job site configuring and setting up base stations or harder-to-use RTK networks.

Ditch the expensive base station rental or purchase.

Untether your business from the constraints of geography and region.

Connect to a fully managed network built entirely on industry-leading Septentrio receivers, with 99.99% uptime.

Work on a network that is constantly growing, with over 100 new stations in the US this quarter alone.

Get everything at one transparent monthly price – \$150 a month or \$1,500 a year.

INERTIAL LABS ANNOUNCES COLLABORATION WITH SONY'S AIRPEAK TO ENHANCE PRODUCTS WITH ADVANCED LIDAR TECHNOLOGY FROM RESEPI

In a significant leap forward in drone technology, Inertial Labs announced a landmark collaboration with Sony to develop a state-of-the-art LiDAR system specifically for Sony's Airpeak drone. This innovative venture is set to revolutionize drone capabilities in various applications, including surveying, mapping, and cinematic videography.

The new LiDAR system, harnessing the expertise of Inertial Labs in sensor technology, promises to deliver unprecedented accuracy and detail in aerial mapping and 3D modeling. Coupled with Sony's leading-edge drone technology, this collaboration is poised to set a new benchmark in the industry.

Designed with professionals in mind, this advanced LiDAR system integrated into Sony's Airpeak drone will significantly improve workflow efficiency and data accuracy, particularly in areas like construction, agriculture, and filmmaking.

"This collaboration aligns with our commitment to innovation and providing our customers with cutting-edge technology," said Kento Sayama, Deputy Vice President of Imaging Solutions, Sony



Electronics. "Inertial Lab's expertise in LiDAR and sensor technology complements our vision for the Airpeak, setting a new standard for drone capabilities."

Inertial Labs CEO Jamie Marraccini added, "Working with Sony, a world leader in technology, allows us to push the boundaries of what's possible in drone applications. This partnership is a testament

to our shared dedication to advancing the industry."

The collaboration is not just a step forward for professional drone use but also an indication of the potential for future drone technology across various sectors. The new LiDAR-equipped Airpeak drone is expected to be a game-changer in multiple industries, providing advanced tools for professionals worldwide.

Septentrio expands UAV ecosystem for reliable GNSS positioning

Septentrio, a leader in high-precision GNSS* positioning solutions, is closely working with several major drone solutions providers including 3DR, Holybro, ARK Electronics and Systork, which is resulting in various new products that allow easier prototyping or integration of the mosaic™ GNSS receiver into UAVs.

mosaic™ is a compact triple-frequency receiver leveraging signals from all available GNSS constellations to achieve the highest degree of positioning availability, even under challenging conditions. Built-in anti-jamming and anti-spoofing** technology protects mosaic™ against intentional or unintentional interference. Such a high level of positioning robustness is important for applications where safety is a concern, for example for drone-shows and delivery drones. A high level of positioning reliability is also required by UAVs which operate in challenging environments such as around high structures, under foliage or in places of possible RF interference. In addition to collaborations with



hardware integrators Septentrio also works closely with the open-source autopilot community including PX4 and Ardupilot to facilitate a smooth integration process for end-users.

"We are pleased to see the success of our current partnerships and are open to working with other integrators who are interested in making UAV-specific products with a competitive edge of superior reliability and resilience. We are also grateful for the excellent support of the community with their recent updates to PX4 and Ardupilot, which include mosaic™ features which are essential for UAVs," commented Gustavo Lopez, Market Portfolio Manager at

Septentrio.

The recently available products that bring reliable high-accuracy positioning to UAVs include Holybro H-RTK mosaic-H (dual antenna heading), 3DR mosaic-X5 CAN GPS, Systork Linnet mosaic-X5 and ARK mosaic-x5 GPS. Such products offer UAV-centered features such as magnetometer, barometer or UAVCAN communication. They also feature the mosaic™ module which receives signals from all GNSS constellations including GPS, GLONASS, Galileo, BeiDou and QZSS and outputs centimeter-level RTK positioning as well as full GNSS carrier raw data. Dual antenna operation is also supported with mosaic-H for heading and pitch or heading and roll orientation with sub-degree accuracy. Advanced anti-interference technology AIM+ not only protects the system from malicious jamming and spoofing attacks, but also reduces the risk of self-interference which occurs when nearby electronics like cameras and servos accidentally emit radio signals that interfere with GPS/GNSS.

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NSPA awards first counter-small uas (c-suas) multinational contract in nato's history

The NATO Support and Procurement Agency (NSPA) has approved the first Counter-small UAS (C-SUAS) procurement framework agreement in NATO's history. The framework agreement, initially valid for three years, was awarded via COBBS BELUX BV, DroneShield's and MyDefence in-country Belgium and Luxemburg partner, for MyDefence Wingman and DronesShield Dronegun Mk4, on behalf of the Communications Cryptographic and Electronic (CCE) Support Partnership (SP). The CCE SP is managed by NSPA, with Belgium as the sponsoring Partnership Nation.

The framework agreement offers a unique provision of leasing, acquisition and integrated logistics services. The innovative leasing arrangement enables

end-users with the opportunity to trial the equipment and assess needs and requirements before committing to a full fleet acquisition.

Overall, the C-SUAS framework agreement addresses an emerging capability gap in the militarized drone domain by provisioning equipment to detect as well as neutralize small drone-based threats, which have grown exponentially in the last few years.

In September 2023, the NATO Counter Unmanned Aircraft System Technical Interoperability Exercise (C-UAS TIE23) brought together military, scientific and industry specialists to test high-tech commercial solutions used to detect, identify, and neutralise drones.

NSPA is NATO's lead organisation for multinational acquisition, support and sustainment in all domains. The

Agency acts in the market to link industry capabilities and nations requirements to find the most cost-effective and efficient solutions, whether for national or collective defence.

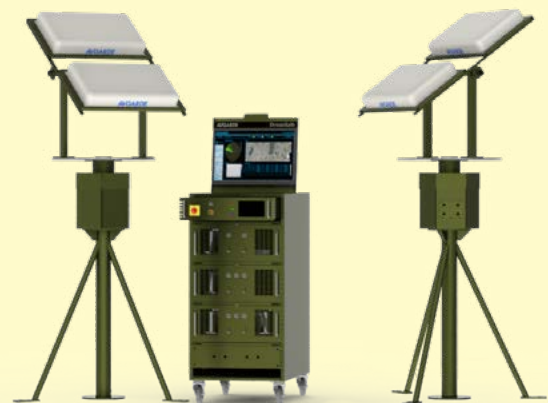
The Agency's objective is to obtain the best service or equipment at the best price for the customer by consolidating requirements from multiple nations in a cost-efficient way through its Support Partnerships. This support structure is a distinctive feature of NSPA. Participating Nations provide governance and guidance, whereas NSPA develops capabilities and manages Nations' requirements. The consolidation of requirements provides economies of scale, reducing costs and logistics footprint, and the legal framework offers a common and efficient support.

AVGARDE wins Indian defence innovation contest with AI-driven C-UAS

AVGARDE has won the Defence Research and Development Organisation (DRDO) Dare to Dream 4.0 contest for countermeasures for drones and swarms of drones. The company competed under the national-level startup innovations category.

Incubated at the Indian Institute of Science Bangalore and the Indian Institute of Technology Guwahati, AVGARDE is building an AI-driven object sensing platform for low-altitude airspace management. Currently, the AVGARDE DeepSense platform offers three product lines: DroneSafe - an AI-enabled counter-drone system to detect, classify, mitigate and report aerial risks/threats from aerial objects; DIWAR - an all-band GPS jammer for tackling drones and inhibiting its airborne motions; and BirdsEye - a bird detection and monitoring radar.

The DRDO Dare to Dream competition provides an opportunity for startups and innovators to address key challenges in emerging technologies that can help boost India's aerospace and defence capabilities.



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BlueHalo to Provide US Army with Full-Cycle Support for HEL Systems

The Palletized High Energy Laser (P-HEL) system, developed by BlueHalo in support of the U.S. Army Rapid Capabilities and Critical Technologies Office (RCCTO), has a proven track record of successfully engaging and eliminating small unmanned aerial system (sUAS) threats to forces and critical infrastructure—a rapidly growing concern to U.S. battlefield dominance. BlueHalo was awarded a four-year logistics support contract to provide preventative and corrective maintenance along with operator and maintenance team training for BlueHalo’s P-HEL system. This newly awarded contract establishes BlueHalo as the full-cycle lead system integrator from prototype development to frontline operations for the P-HEL system.

“With this contract, BlueHalo is now providing full-scale Directed Energy support to our customers—at home through advanced innovation, in the field through maintenance and training support, and strategically through operational guidance and battlespace management,” said Jonathan Moneymaker, BlueHalo Chief Executive Officer. “Our industry-leading Directed Energy expertise and intimate knowledge of the P-HEL system, combined with lessons learned from deployment, will truly transform how our Warfighters use laser weapon systems to combat evolving enemy sUAS threats.”

As the foundation of P-HEL, BlueHalo’s LOCUST Laser Weapon System (LWS) combines precision optical and laser hardware with advanced software,



artificial intelligence (AI), and processing to enable and enhance the directed energy “kill chain”. LOCUST LWS addresses the inherent need for mobility and quick deployment—tracking, identifying, and engaging of a wide variety of targets with its hard-kill high energy laser.

In April 2022, BlueHalo delivered its first mature prototype of the P-HEL system. The U.S. Army RCCTO deployed the unit overseas, where it commenced operational employment in November 2022. Earlier this year, BlueHalo’s second P-HEL was delivered and deployed overseas. Both

P-HEL systems have undergone preventative and corrective maintenance in the field, to maintain operational tempo and continue operator system training.

“We are excited to continue our partnership with the Army and RCCTO to support P-HEL,” said Jimmy Jenkins, BlueHalo Sector President. “This program captures BlueHalo’s ability to take advanced innovation from rapid prototype to deployment to sustainment, integrating new technologies into operational systems to strengthen our defenses against next-generation air threats.”

DEDRONE RECEIVES SAFETY ACT DESIGNATION FROM DHS

Dedrone, the leader in smart airspace security announced that it is the first counter-drone company to receive the Support Anti-Terrorism by Fostering Effective Technologies Act of 2002 (SAFETY Act) Designation status from the Department of Homeland Security (DHS) Office of SAFETY Act Implementation (OSAI). Both its command-and-control (C2) platform, DedroneTracker.AI, and its DedroneSensor radio frequency (RF) sensors have been officially awarded as approved technology under the SAFETY Act. Dedrone was advised by Petrone Risk in the successful pursuit of this award with Senior Managing Director Kathleen Lupia leading the effort.

“With this Designation award, DHS today made clear that airspace security is now an essential part of any anti-terrorism security apparatus,” said Aaditya Devarakonda, CEO of Dedrone. “Having previously



worked with some of our customers in their efforts to acquire SAFETY Act acknowledgment, we know that OSAI’s process is extremely rigorous. This is a tremendous honor for Dedrone as the preeminent counter-drone company, now with SAFETY Act Designation status technology and a resounding validation of our ongoing work to ensure our dual-use technology is as effective as possible for both civilian and military applications.”

The SAFETY Act was designed to encourage the development and use of anti-terrorism products

and services. A technology must have demonstrated effectiveness during operational testing or through prior use. Designation provides a liability cap as well as exclusive action in federal court, no joint and several liability for non-economic damages, and no punitive damages or prejudgment interest. The full Designation is in effect for Dedrone until April 30, 2029. Dedrone’s awarded technology deployed during its period of Designation is protected for the lifetime of its deployment.

Dedrone is implemented across 32 countries and is used by five of the G-7 nation governments; 829 sites, including 49 airports and 59 stadiums; 15 US federal entities and 20 non-US governments. The company actively provides counter-drone solutions for some of the most high-profile events and organizations, working with public safety entities to protect over 360 sites globally.

INVOLI AND MATRIXSPACE UNVEIL ONE-STOP SOLUTION FOR COST-EFFECTIVE, COMPLETE AIR TRAFFIC AWARENESS

By combining INVOLI's cooperative air traffic detection capabilities with MatrixSpace's expertise in non-cooperative air traffic detection, customers can now access unparalleled traffic awareness through a single platform or API. This integration provides a level of simplicity and cost-effectiveness previously unattainable in the industry.

INVOLI specializes in detecting cooperative air traffic for aircraft surveillance data, while MatrixSpace excels in detecting non-cooperative air traffic using its miniaturized primary radar technology. The integration of these two cutting-edge hardware products allows for complete air traffic surveillance in a single deployment. MatrixSpace Radar offers robust situational awareness of both airborne and ground-based objects, regardless of lighting and weather conditions. This facilitates highly accurate drone detection and Counter Unmanned Aircraft System (CUAS) capabilities, Beyond Visual Line of Sight (BVLOS) flight for uncrewed, autonomous and tethered aircraft, and overall general aviation safety. MatrixSpace Radar is a very low SWaP-C (size, weight, power and cost), requires no additional infrastructure and is deployable in minutes without specialist training.

"This collaboration between INVOLI and MatrixSpace represents a significant advancement in air traffic surveillance technology," said Manu Lubrano, CEO of INVOLI. "By merging our respective strengths, we are empowering our customers with comprehensive and seamless air traffic awareness, ultimately enhancing safety and efficiency in various operational contexts."

Echoing Manu's sentiments, Lori DeMatteis, CRO of MatrixSpace, added, "Our partnership with INVOLI enables us to offer a holistic solution that meets the evolving needs of the aviation industry. Together, we

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PARTNERSHIP

are revolutionizing air traffic surveillance by providing a unified platform for detecting both cooperative and non-cooperative air traffic."

This integrated solution is poised to transform various sectors, including beyond visual line of sight (BVLOS) drone operations

and the surveillance of sensitive sites such as prisons and energy infrastructure. The ability to detect both cooperative and non-cooperative air traffic in one deployment opens up new possibilities for enhanced safety and security across diverse applications.

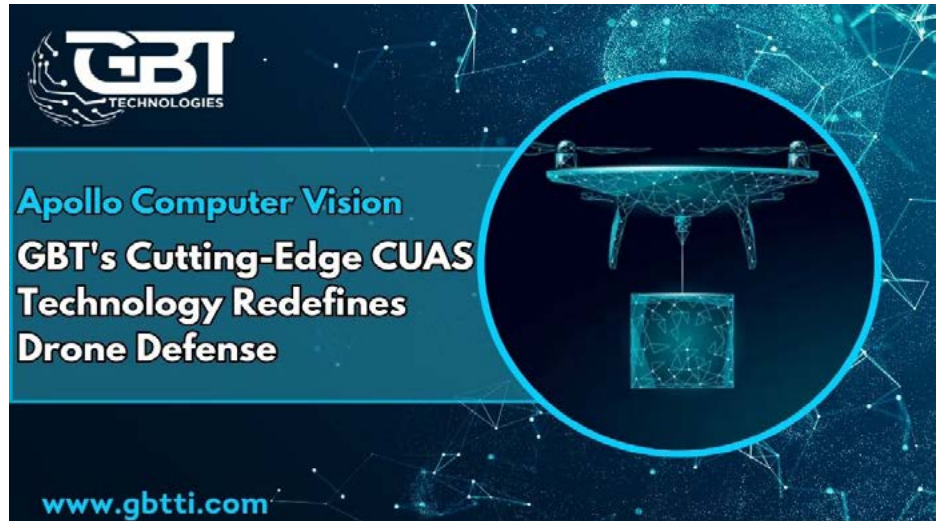
GBT TECHNOLOGIES ADAPTS PIONEERING APOLLO TECHNOLOGY FOR NEXT-GENERATION COUNTER-DRONE SYSTEM

GBT Technologies Inc. has recently announced the use in a testing scenario of its innovative Apollo computer vision technology for a Counter-Unmanned Aerial Systems (CUAS) application.

VisionWave Technologies, Inc., which acquired Apollo and which is partially owned by the Company is working to adapt the Apollo computer vision technology system which combines advanced radio frequency (RF) technology and artificial intelligence (AI) with the goal of enhancing drone defense capabilities.

The CUAS system is designed to offer a robust defense package. It utilizes advanced RF technology and sophisticated neural networks to create accurate 3D images and video feeds. This enables operators to detect, identify and track potential drone threats in real-time. The system's AI core rapidly analyzes data, detects hostile UAVs, and makes informed decisions to neutralize them, ensuring maximum efficiency and effectiveness.

The CUAS system is not being offered as just a product, but rather a complete defense solution with the goal of assimilating into the modern security landscape. The goal of CUAS which is still under development and is currently being tested is to enhance national security by protecting critical



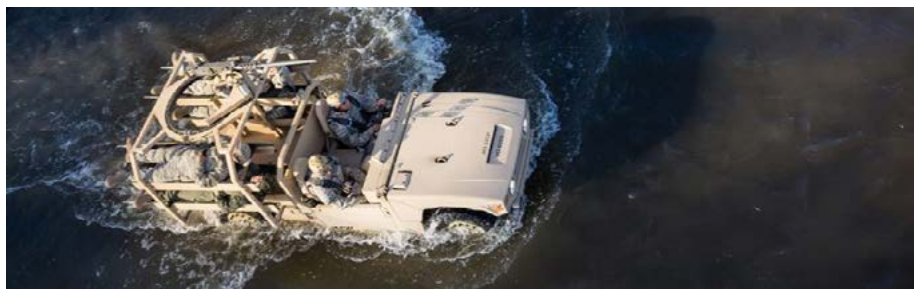
infrastructure and assets from unauthorized drones, which can also be used by private property holders. The Company is committed to developing intelligent solutions that address the evolving needs of national security and private sector defense. This adaptation of Apollo technology represents a pioneering approach to CUAS.

There is no guarantee that VisionWave Technologies, Inc. will be successful in researching, developing or implementing this system. In order

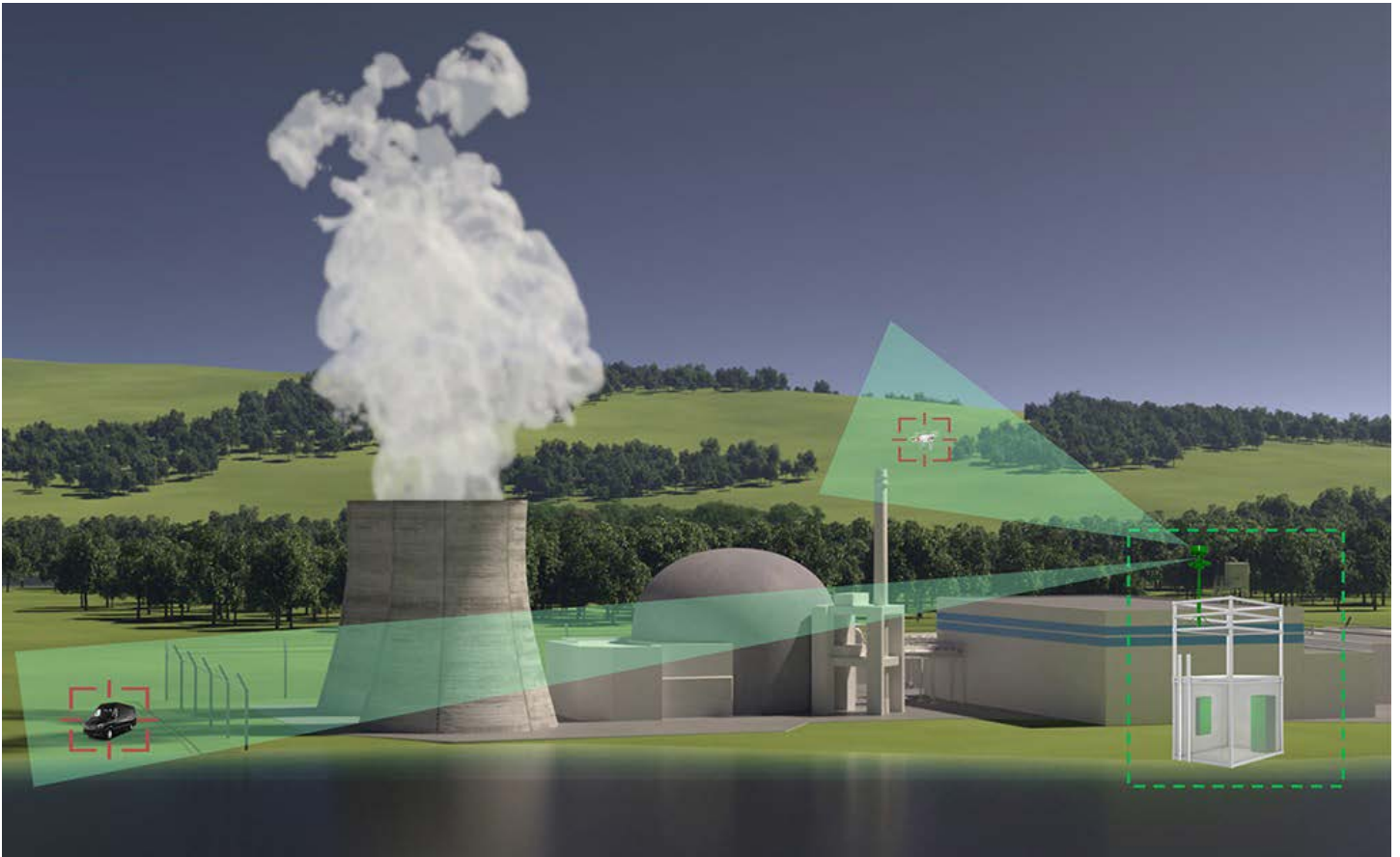
to successfully implement this concept, VisionWave Technologies, Inc. will need to raise adequate capital to support its research and, if successfully researched, developed and granted regulatory approval, VisionWave Technologies, Inc. would need to enter into a strategic relationship with a third party that has experience in manufacturing, selling and distributing this product. There is no guarantee that VisionWave Technologies, Inc. will be successful in any or all of these critical steps.

MSI DEFENSE SOLUTIONS AWARDED USD24 MILLION CONTRACT FOR C-UAS LAUNCHER SYSTEMS

MSI Defense Solutions LLC, Mooresville, North Carolina, was awarded a not-to-exceed \$24,186,464, firm-fixed-price, undefinitized contract for the procurement of five (5) Electronic Advanced Ground Launcher System Counter Unmanned Aerial System modular systems as well as associated engineering and maintenance support, support equipment, initial spares, initial training materials, and technical manuals in support of emerging and persistent Unmanned Aerial System threats in the U.S. Central Command area of responsibility.



HENSOLDT SINGAPORE ENTERS INTO STRATEGIC COLLABORATION WITH HTX



HENSOLDT, a leading sensor solution provider, announces its collaboration with Singapore's HTX (Home Team Science and Technology Agency), to drive the advancement of Rapid Deployable Counter UAV Systems (CUAS) for urban environment. This collaboration is a response to the ever-increasing threat posed by over-the-counter drones. Combining HENSOLDT Singapore's specialized software expertise, system integration skills, and operational insights from HTX, the collaboration aims to deliver an integrated solution that meets the unique demands of an urban environment.

The rapid deployable CUAS system, a key outcome of this partnership, incorporates HENSOLDT's Z-ASSESS software and state-of-the-art Multi-Sensors Data Fusion (MSDF). The system is built on an extremely modular and scalable concept, includes Surveillance Radar, EO/IR cameras, Jammer

and allowing seamless integration of additional sensors to enhance its capabilities. This CUAS suite is designed to provide real-time threat detection and mapping, offering users a comprehensive view of identified threats overlaid on chosen zones. The system is showcased for the first time at the HTX Pavilion at Milipol Asia-Pacific-TechX Summit 2024.

The collaboration illustrates the high level of cooperation between HENSOLDT Singapore and HTX. "This is only the beginning of such strategic partnerships between the HTX Singapore and HENSOLDT Singapore. We look forward to expanding this relationship in the near future", says Ines Maiwald, Head of Business Development Asia at HENSOLDT.

"The collaboration aims to address the unique challenges presented by urban environments, providing an effective solution for CUAS in

Singapore", says Dr. Ben Soon, Senior Principal Engineer from HTX, who played a crucial role in architecting the system's design.

HENSOLDT Singapore has previously demonstrated its expertise in drone defense through its CUAS system. This collaboration with HTX signifies a shared commitment to advancing security measures and responding proactively to evolving threats. The CUAS system is not only intended for permanent deployment but also for temporary protection during major events, showcasing its versatility and adaptability.

The collaboration also represents a significant step in addressing the complex security landscape associated with unmanned aerial systems in urban areas. This joint effort is poised to set new standards for CUAS technology, contributing to enhanced security and protection against emerging threats.

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