UAS and SmallSat Weekly News

Contents

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8Oct22

Leonardo DRS Teams with SpearUAV Ltd for Nano-scale Aerial Munitions October 7, 2022 Military | News

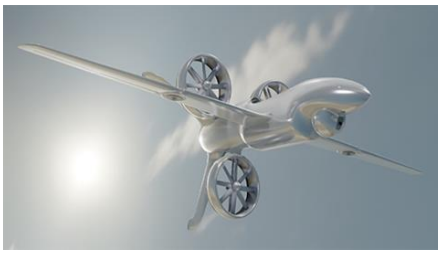
Leonardo DRS, Inc. (DRS) announced today its Land Systems business unit in St. Louis, Missouri has entered into an agreement with SpearUAV Ltd. (Spear) of Israel to develop a version of Spear's VIPER nano-scale aerial munition for the US market.

Under terms of the agreement, DRS and Spear are adapting the VIPER aerial munition to meet the emerging requirements of multiple US military customers. Spear developed VIPER rapidly in response to lessons learned during recent major conflicts. The vertical launch, quad-rotor VIPER provides a warfighter at the tactical edge an affordable, simple-to-use, and effective organic aerial munition against a variety of targets.

Small aerial munitions like VIPER are revolutionizing small unit tactics by putting precision lethality literally in the hands of the individual warfighter. VIPER provides organic, responsive, precision fires at the squad level, allowing operators to destroy immediate threats like enemy snipers and RPG teams without relying on higher-level assets. The delivery accuracy possible with VIPER also minimizes collateral damage in complex urban terrain.
https://uasweekly.com/2022/10/07/leonardo-drs-teams-with-spearuav-ltd-for-nano-scale-aerial-munitions/?utm_source=rss&utm_medium=rss&utm_campaign=leonardo-drs-teams-with-spearuav-ltd-for-nano-scale-aerial-munitions&utm_term=2022-10-07

DARPA Seeks Leap-Ahead Capabilities for Vertical Takeoff and Landing X-Plane

October 7, 2022 News



DARPA's AdvaNced airCraft Infrastructure-Less Launch And RecoverY X-Plane program, nicknamed ANCILLARY, aims to develop and flight demonstrate critical technologies required for a leap ahead in vertical takeoff and landing (VTOL), low-weight, high-payload, and long-endurance capabilities. The goal is to build a plane that can launch from ship flight decks and small austere land locations in adverse weather without launch and recovery equipment typically needed for these systems.

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"The ability for the warfighter to deploy and retrieve such systems in challenging conditions without reliance on infrastructure would minimize personnel, costs, and vulnerability during sensitive operations," said Steve Komadina, the DARPA program manager for ANCILLARY.

A large non-traditional commercial industry base has fueled recent VTOL research investments and advanced controls leading to innovative vehicle configurations spanning size, weight, power, and cost. Advancements in small propulsion systems, high-capacity low weight batteries, fuel cells, materials, electronics, and low-cost additive manufacturing can now enable new architectures and designs to be explored in this space.

"ANCILLARY plans to bring together developments in advanced control theory, aerodynamic modelling, and advanced propulsion to solve a combination of challenging design objectives," said Komadina. https://uasweekly.com/2022/10/07/darpa-seeks-leap-ahead-capabilities-for-vertical-takeoff-and-landing-x-plane/?utm_source=rss&utm_medium=rss&utm_campaign=darpa-seeks-leap-ahead-capabilities-for-vertical-takeoff-and-landing-x-plane&utm_term=2022-10-07

Huawei and Dronetech Elevate Partnership to Facilitate Sustainable Farming in Austria October 6, 2022 News

At the Nussböckgut vineyard, a centuries-old estate in Upper Austria that was first mentioned in a document in 1323, the two companies provided an update on their pioneer project that started last year and introduced how their 5G and IoT technologies can advance sustainability in agriculture. The two companies also hosted a panel made up of digitalization and agriculture experts discussing how technology innovation, and 5G particularly, can promote sustainable farming amid rising global concerns for food security.

The two companies announced that their collaboration is entering the second phase called "Digital Sky". Huawei will provide cloud computing services on top of 5G, which will serve as the foundation for real-time artificial intelligence (AI) analysis. Meanwhile, equipped with high-resolution cameras and sensors, Dronetech's drones will survey the land and objects to capture images and data that will be processed by AI, and provide actionable findings to the users instantly.

The technology helps farmers detect small insects, monitor crop status, and predict harvests, allowing them to optimize the use of water, chemicals and pesticides precisely and with minimum waste.

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In the second phase, the project plans to develop a shared economy approach for drone services. Users from different sectors, including farmers, municipalities, corporates, or individuals could rent the drones and their AI solutions for a wide range of applications, such as inspection of solar panels, traffic management, or power lines wear-out detection. https://uasweekly.com/2022/10/06/huawei-and-dronetech-elevate-partnership-to-facilitate-sustainable-farming-in-austria/?utm_source=rss&utm_medium=rss&utm_campaign=huawei-and-dronetech-elevate-partnership-to-facilitate-sustainable-farming-in-austria&utm_term=2022-10-06

General Atomics Aeronautical Systems Protector Completes Acceptance Test Procedures

October 6, 2022 Military | News

Acceptance Test Procedures for the first Protector RG Mk1 Remotely Piloted Aircraft system has been completed. Completion allowed the official hand-over of the aircraft to the UK Royal Air Force (RAF), the launch customer of the MQ-9B RPA system developed by General Atomics Aeronautical Systems, Inc. Protector is a specially configured model of MQ-9B, designed to meet the unique requirements of the RAF.

The aircraft was accepted by Air Vice Marshal Simon Ellard, Director Combat Air at Defence Equipment and Support, the procurement arm of the UK Ministry of Defence. “It was a great pleasure to accept the official handover of the first Protector aircraft on behalf of the MOD, following the successful completion of Acceptance Test Procedures. We now look forward to the first delivery to RAF Waddington during 2023,” he said. The aircraft will be used to train RAF technicians how to maintain the capability, prior to the arrival of the first aircraft in the UK next year.” https://uasweekly.com/2022/10/06/general-atomics-aeronautical-systems-protector-completes-acceptance-test-procedures/?utm_source=rss&utm_medium=rss&utm_campaign=general-atomics-aeronautical-systems-protector-completes-acceptance-test-procedures&utm_term=2022-10-06

Schiebel awarded prestigious search and rescue contract by Sasemar in Spain

October 6, 2022 News

The scope of this multi-million Euro contract includes the further development and delivery of the high performance CAMCOPTER® S-100 UAS, including the integration of the latest high-tech sensors, allowing the detection and

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identification, both day and night, of castaways, drifting objects and polluting substances in the high seas as well as monitoring toxic and hazardous atmospheres, emissions from ships and sea surface pollution.

The S-100 payloads will include an Overwatch Imaging PT-8DN Oceanwatch, a Trakka TC-300 EO/IR sensor, an Aeromon BH-12 Emission Measuring Device, and a set of SENSIA Gas Imaging Devices.
The innovative payload suite allows the S-100 to perform all requested missions simultaneously, without the need to change the sensors. For the integration and fulfillment of the contract, Schiebel partnered with a number of technology leaders, including the Spanish technology business group GMV Innovating Solutions which is responsible for the network infrastructure.

The Maritime Safety and Rescue Society is part of the Spanish Ministry of Transport, Mobility and Urban Agenda. https://uasweekly.com/2022/10/06/schiebel-awarded-prestigious-search-and-rescue-contract-by-sasemar-in-spain/?utm_source=rss&utm_medium=rss&utm_campaign=schiebel-awarded-prestigious-search-and-rescue-contract-by-sasemar-in-spain&utm_term=2022-10-06

Skyports and Joby partner on 'Living Lab' trial vertiport facility Bruce Crumley - Oct. 7th 2022

Joby and Skyports announced their partnership Thursday, explaining the Living Lab initiative as a tool for testing the array of technologies and procedures used at vertiports and to gauge and enhance both the efficiency of future infrastructure and passenger experience in using them. The concept should allow the pair to receive ongoing feedback from visitors to the unit and incorporate insights to improve their final designs for air taxi terminals.

Eric Allison, Joby's head of product, said the objective of its Living Lab project with Skyports is to make sure the vertiport experience is in sync with the ways air taxis will entirely change the concept of urban mobility.

Allison said, "Joby riders will skip the traffic, flying directly to their destination at up to 200 mph. But to realize the vision of everyday flight, we need to deliver a seamless and more rapid

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experience on the ground. The Living Lab will allow us to rethink the terminal experience, keeping our customers front and center throughout their entire journey."

Among other objectives, the Joby-Skyports Living Lab test vertiport will seek to create the model all stakeholders in future air taxi and other urban air mobility providers will refer to as they endeavor to offer maximum service to passengers.
https://dronedj.com/2022/10/07/skyports-joby-vertiport/

How Ukrainians, targeting by drone, attacked Russian artillery in Kherson

Isabelle Khurshudyan and Kamila Hrabchuk October 8, 2022

A Ukrainian soldier who goes by the call name "Viter" carries a Leleka-100 drone about to be launched, and carefully navigates his way through a field on Thursday in the Kherson region, Ukraine, seeded with Russian mines.

KHERSON REGION, Ukraine — The discovery was made by two Ukrainian soldiers staring wide-eyed at their laptop screens, set up in the trunk of their SUV. They sat on a makeshift bench, the large plastic case for their drone. What they were looking at was some 25 miles away, deep into Russian-occupied Ukrainian territory.

It was a Russian artillery battery positioned in a thin slice of tree line. The drone operator, Leonid Slobodian, started counting out loud as he zoomed in and took screenshots of the findings. He saw at least five guns, trucks that probably carried ammunition and counterbattery radar. This was what the Ukrainian military calls a "fat" target.

Beside him, Oleksandr Kapli fired off a voice message to the members of the 128th Mountain Assault Brigade also watching a live stream of the drone camera. "We need to smash this from front to back," Kapli said into his phone. Then the expletive-ridden response: "Send all of the footage and we'll [mess] it up." https://www.washingtonpost.com/world/2022/10/08/ukraine-russia-drones-artillery/?utm_campaign=wp_post_most&utm_medium=email&utm_source=newsletter&wpisrc=nl_most&carta-url=https%3A%2F%2Fs2.washingtonpost.com%2Fcar-ln-tr%2F3820540%2F6341a13ff3d9003c580a1b55%2F5d1904d69bbc0f06dbb82657%2F38%2F70%2F6341a13ff3d9003c580a1b55&wp_cu=42d759511fb332833163513fe68d9118%7C8CF3607F1FEA67A3E0530100007F8E4B

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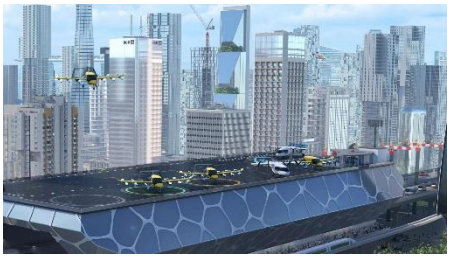
URBAN AIR MOBILITY Concept of Operations



Boeing and its joint venture, Wisk, have partnered to release a Concept of Operations (ConOps) for uncrewed passenger-carrying urban air mobility (UAM) operations using highly automated, electric aircraft. This release includes a summary and detailed ConOps documents. While the ConOps is presented within the context of the United States National Airspace System (NAS), it is intended to provide a blueprint for global UAM operations. The ConOps is for the safe initiation of uncrewed UAM passenger operations in the NAS by the end of this decade, while providing a stepping stone to the goal of transitioning to high-throughput operations in the years to follow.

This ConOps outlines the key principles and assumptions for UAM aircraft, the operational environment, and normal operations. The Boeing and Wisk ConOps extends existing airspace concepts and covers uncrewed UAM aircraft, fleet operations centers, third-party service providers, vertiports and vertiport managers, and airspace infrastructure. Ultimately, public acceptance of uncrewed UAM operations will be the crucial component to scaling the market.

As we build together, the industry will change shape and evolve. We invite your inputs and feedback to this ConOps for uncrewed UAM. Please send an email with feedback to urbanairmobility@boeing.com. https://www.boeing.com/innovation/con-ops?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top

10Oct22

Which Comes First, the Vertiport or the eVTOL? Italy's First Air Mobility Vertiport

Miriam McNabb October 09, 2022 by DRONELIFE Staff Writer Ian M Crosby

This morning, Aeroporti di Roma, Volocopter, UrbanV, and Atlantia completed Italy's first crewed eVTOL public test flight during the presentation of the country's first advanced air mobility (AAM) testing vertiport. Major advancements have been made in flight technology, vertiport design, and the necessary regulations to allow the first AAM services between Fiumicino Airport and the city of Rome in 2024.

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Volocopter's test pilot flew the electric Volocopter 2X for 5 minutes at 40 km/h while 40 meters in the air, maneuvering in a figure 8 pattern. The test flight had secured all the required clearances from Italian authorities, the civil aviation authority (Ente Nazionale per l'Aviazione Civile – ENAC), and the provider of air traffic control services (Ente Nazionale Assistenza al Volo – ENAV). Developed for rapid, emission-free passenger flights within urban environments,

After the test flight, UrbanV hosted a vertiport demonstration. Built in compliance with the European Union Aviation Safety Agency's "Prototype Technical Specifications for the Design of VFR Vertiports for Operation with Manned VTOL-Capable Aircraft Certified in the Enhanced Category," the vertiport occupies the regulatory sandbox approved by ENAC.
https://dronelife.com/2022/10/09/which-comes-first-the-vertiport-or-the-evtol/

HURRICANE IAN: HOW DRONES PITCHED IN TO HELP RESCUE AND RECOVERY EFFORTS October 6, 2022 Sally French

Hurricane Ian, a massively destructive and deadly Category 4 Atlantic hurricane that caused widespread damage throughout western Cuba and the southeast United States, was responsible for more than 100 fatalities, plus extensive damage to property, power outages and more.

The National Oceanic and Atmospheric Administration deployed an Area-I Altius-600 uncrewed aircraft system straight into the hurricane, mounted on a NOAA WP-3D Orion Hurricane Hunter aircraft. The drone was able to collect data in areas of the storm deemed too dangerous to risk sending a human into.

The drone was able to collect data that ground level, fixed systems like weather stations and buoys, cannot. It's also able to track along lower altitudes than what you might get from something like a weather balloon. The information collected by NOAA's drone can help scientists better understand the extremely turbulent hurricane boundary layer environment and clarify how mega tropical systems like Hurricane Ian function.

Airborne Response used drones to help critical infrastructure providers assess damage, restore power, and process insurance claims in the aftermath of major disaster. It has completed more than 500 drone flights related to Hurricane Ian assessment projects.

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Over on Florida's Sanibel Island, which was separated from the mainland when Hurricane Ian caused a bridge to collapse, Verizon used a drone to create a popup flying cell site. The site is made up of a tethered drone outfitted with a cellular node, It was able to provide coverage for a 5–7-mile radius. Since it's tethered, it can fly for up to 1,000 hours.
https://www.thedronegirl.com/2022/10/10/hurricane-ian-drones-recovery/

Texas grants $3 million to LSUASC center of excellence to develop emergency response October 7, 2022 Jenny Beechener UAS traffic management news, Urban air mobility

Texas A&M University-Corpus Christi's Lone Star Unmanned Aircraft System Center of Excellence and Innovation (LSUASC) designated Federal Aviation Administration test site has received $3 million in exceptional item funding for FY 22-23 biennium from the Texas Legislature. In conjunction with the Texas Division of Emergency Management, LSUASC has been tasked by the State of Texas to develop a disaster response and recovery division to support all levels of government in their emergency management efforts.

As part of this initiative, Avision's Uncrewed Traffic Management (UTM) platform provides LSUASC with drone mission planning, airspace management, and flight execution services. Avision's next-generation airspace management services are deployed in the US and internationally.

To test their capabilities, LSUASC pilots, technicians, staff, and interns, in conjunction with the City of Corpus Christi, Nueces County, Corpus Christi Fire Department, and Corpus Christi Police Department, ran a disaster simulation from September 20-22, 2022. The exercise, which took place in various locations around Nueces County, simulated what might occur during a weather-related natural disaster. https://www.unmannedairspace.info/latest-news-and-information/texas-grants-usd3-million-to-lsuasc-centre-of-excellence-to-develop-emergency-response-efforts/

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US FAA seeks additional administrators for recreational drone test October 4, 2022 Jenny Beechener UAS traffic management news, Urban air mobility

The US Federal Aviation Administration has opened the second application period for entities interested in serving as administrators for The Recreational UAS Safety Test (TRUST). Potential test administrators must submit their applications by 11 November 2022.

As drones become more popular and accessible, the FAA is committed to ensuring that the public is aware of regulations and how to operate safely in the nation's airspace. Designated test administrators play a key role, making the test accessible to all recreational drone flyers. Educational institutions, manufacturers and aeromodelling organizations are encouraged to apply.

Interested parties should review the selection criteria on the FAA website. The FAA will announce selected test administrators in March 2023 and expects them to begin offering the test to recreational drone pilots at that time. https://www.unmannedairspace.info/latest-news-and-information/us-faa-seeks-additional-administrators-for-recreational-drone-test/

Ohio sheriff's force to swap its helicopters for enlarged drone fleet Bruce Crumley - Oct. 10th 2022

Ohio's Hamilton County Sheriff's Office will be making increased use of drones to take up slack created by it retiring its two helicopters. Though officials acknowledge there may be some loss of mission potential in the exchange, they say the force will realize operational savings of several hundred thousand dollars – and a windfall income of millions from selling the choppers.

Whirly-birds are very expensive to fly, with typical deployment by police forces around the US often costing anywhere from a grand to $10,000 per mission. Those collectively take a $3 million annual bite out of Hamilton County Sheriff's budget, which is also facing a recurring maintenance bill of $300,000 for once of the craft.

For that same $300K, McGuffey says, her sheriffs can add 15 more specialized drones to their current fleet of UAVs, none of which require anywhere near the kind of upkeep or repair that helicopters do. The other financial motive for the move: One of the choppers the force

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purchased four years ago for $1.6 million will fetch $2 million on today's market. https://dronedj.com/2022/10/10/drone-helicopter-sheriff/#more-87493

11Oct22

DRONE MARKET MAP: THE DRONE WORLD IN AN INFOGRAPHIC ED ALVARADO

OCTOBER 10, 2022

DRONE INDUSTRY INSIGHTS

One of the most popular infographics that we offer is our Drone Market Map, and we are happy to announce a brand new version for 2022. This new edition of the market map features 1,076 drone companies, including 379 new companies that weren't in the 2019 edition.

The primary purpose of the drone market map is to highlight the diversity of the global drone industry and to display some of the leading drone companies that work in various sectors of the market. Additionally, the map is complemented by our Drone Company Database, which lists all of the companies on the map as well as their location and contact information.

Where are most drone companies located? The majority of companies included in our drone market map are headquartered in Europe (40.3%) and North America (35.8%). Although Asia is the leading drone market region in the world, it is also dominated by a smaller number of companies which is why it only represents 11.6% of the companies in the drone market map.

At the country level, the United States boasts the highest number of companies in the 2022 drone market map, with a total of 337 (31.3%). This is followed by the United Kingdom (7.3%), Germany (6.6%), France (4.7%) and Switzerland (4.7%). All of these are among the top drone markets, and their vibrant economies are one reason why so many drone companies have established headquarters within their borders. https://droneii.com/drone-market-map-2022-drone-world-infographic?utm_source=email&utm_medium=newsletter&utm_campaign=release-dmr-2022&utm_content=read-blog&utm_term=continue-reading-button&goal=0_8e282c8de0-abedfa61cd-261904885&mc_cid=abedfa61cd&mc_eid=7a6c4a1fef

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Sabrewing CEO Talks Record-Breaking Cargo Drone Hover Flight Jessica Reed | October 10, 2022

Sabrewing Aircraft Company, based in California, recently announced the successful completion of its cargo drone prototype's first hover flight with an 829-pound payload. According to the company, this set a new world record for a commercial vertical take-off and landing cargo drone.

The company has a $3.2 billion order book so far, including purchase orders for 28 aircraft along with 102 firm orders and letters of intent for more than 400 aircraft. Deliveries of the first 28 aircraft are expected to start by December 2023. Sabrewing has also been awarded contracts by the U.S. Air Force to study autonomous cargo delivery.

The aircraft, called the Rhaegal, is an autonomous UAV (uncrewed aerial vehicle) that utilizes a turbo-electric drivetrain, based on the Ariel 2E motor from Safran Helicopter Engines. It can use up to 50% sustainable aviation fuel, or SAF. The prototype aircraft, the Rhaegal "Alpha," was unveiled in April 2020. At the time, the company had already received a $3.25 million Phase II SBIR contract from the Air Force. This funding was used for research and development related to the aircraft's navigation and detect-and-avoid systems.
https://www.aviationtoday.com/2022/10/10/sabrewing-ceo-talks-record-breaking-cargo-drone-hover-flight/

This Indian Drone is "Built Like a Bird, Tested Like a Tank": IdeaForge SWITCH Miriam McNabb October 10, 2022

The IdeaForge SWITCH UAV is a super-light fixed wing, offering a 2-hour flight endurance guarantee. The drone has a swappable payload including a day payload with 25X zoom capabilities and a thermal imaging night payload. SWITCH UAV also offers important security features. IdeaForge doesn't store any data on the cloud, and there is no data stored on the drone: "the data goes straight from the drone to the pilot," says Kruthi.

IdeaForge provides drones to the Indian army, paramilitary groups, public safety, and commercial enterprise. "Every 6 minutes an IdeaForge drone takes off in India," says Kruthi. "That's just in the

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commercial market – the applications we know about." https://dronelife.com/2022/10/10/this-indian-drone-is-built-like-a-bird-tested-like-a-tank-ideaforge-switch/

Delta Airlines will invest up to $200 million in Joby Aviation for a 'home-to-airport' air taxi ANDREW J. HAWKINS Oct 11, 2022

Delta Airlines will invest $60 million in Joby Aviation, a leading electric air taxi startup, to create a "home-to-airport" service using the startup's five-seat electric vertical takeoff and landing aircraft, the companies announced Tuesday. Delta said its investment in Joby could go as high as $200 million if the company hits certain milestones.

The service, which will launch first in New York City and Los Angeles with other cities to follow, will be "mutually exclusive" across the US and UK for five years, with the option to extend that exclusivity for longer, the companies said. A 50 minute trip from Manhattan to JFK could take just 10 minutes.

In a briefing with reporters, Joby CEO JoeBen Bevirt said that a trip from Manhattan to JFK Airport, which can take as long as 50 minutes to an hour when traveling by car or subway, would take as little as 10 minutes when flying in one of the company's five-passenger aircraft — "along with a really spectacular view," he added.

Neither Delta nor Joby would disclose when they intend to launch the service, noting the lengthy regulatory process that Joby's unique aircraft still needs to undergo. They also didn't reveal how the service would be priced, although Bevirt said he wanted fares to be "accessible." Joby has said it intends to launch its first commercial service in 2024.
https://www.theverge.com/2022/10/11/23396851/delta-joby-invest-evtol-home-to-airport

12Oct22

AUVSI slams US states mulling the creation of drone toll lanes Ishveena Singh - Oct. 12th 2022

AUVSI, the world's largest nonprofit organization dedicated to the advancement of uncrewed systems, autonomy, and robotics, says it's willing to take the fight to state legislative sessions to stop all

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proposals that infringe on the FAA's authority of the airspace, promote the creation of drone toll lanes, and seek to impose undue taxes on drone operations.

The drone advocacy group, which focuses on educating lawmakers and promoting smart policy that supports industry growth and innovation, says it has seen a dangerous trend emerge lately. Several state legislative bodies – including those in Texas, Louisiana, West Virginia, and Mississippi – have introduced bills that seek to restrict and tax drone operations.

AUVSI points out that such laws at the state or local government level not only dismantle the federal authority of the airspace, but they also create a dangerous and virtually impossible-to-navigate patchwork of regulations for drone operators. https://dronedj.com/2022/10/12/auvsi-drone-toll-lane-avigation/

Airspeeder completes 'world's first electric flying car race' during inaugural EXA eVTOL event Scooter Doll - Oct. 12th 2022

Nascent eVTOL racing league Airspeeder has successfully completed what it is calling the "world's first electric flying car race" during its inaugural EXA Series event. Two EXA team pilots went head-to-head in South Australia using remotely operated eVTOLs, kicking off a development league that will eventually feed into global Grand Prix series. Check out the video recap of this historical event kicking off electric flight racing.

Airspeeder is an electric vertical take-off and landing (eVTOL) racing league headquartered in London that was first announced in November 2021. The league exists as an entity of Alauda Aeronautics – an electric aviation company based in Adelaide, Australia, where the league's technical HQ is located, alongside its testing grounds. Alauda designs, engineers, and builds the league's eVTOL racing aircraft called "Speeders."

Airspeeder successfully completed its first remote-piloted eVTOL drag race in 2021 as one of its first big steps toward building a competitive league that will consist of multiple teams competing around the globe. These remote-piloted races will comprise Airspeeder's flagship EXA Series to begin and will eventually evolve into a series of Grand Prix taking place in the air above different countries. https://electrek.co/2022/10/12/airspeeder-completes-worlds-first-electric-flying-car-race-exa-evtol-event/#more-87592

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Fortem anti-UAV tech upgrade can neutralize larger drones now battering Ukraine cities Bruce Crumley - Oct. 12th 2022

Ukraine officials aghast at Moscow's merciless aerial attacks on the nation's cities and civilian targets take note: US airspace security and protection specialist Fortem Technologies has upgraded its DroneHunter F700 anti-UAV system to more effectively defeat even larger and faster Group 3 craft like Russian Orlan-10s and Iranian Shahed-136s.

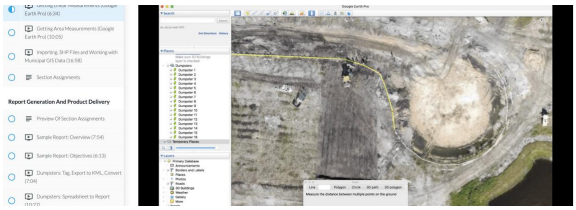
News of Fortem enhancing its anti-UAV system is potentially good news for Ukraine defenders, who since Monday have been scrambling to pick off as many incoming attack UAVs as possible. Those are being unleashed by Moscow as retaliatory strikes on Kyiv and other cities following the bombing of the only bridge linking Russia and occupied Crimea.

Improvements to Fortem's DroneHunter F700 might make it a welcome addition to Ukraine anti-UAV assets by increasing the platform's capacity to neutralize dangerous drones in flight – including lower-range Group 3 craft like the Iranian Shahed-136 kamikaze craft Russia began using last month.

Fortem says its anti-UAV solution has achieved over 85% effectiveness in simulated defense against hostile drones of various sizes. https://dronedj.com/2022/10/12/fortem-anti-uav-ukraine/

13Oct22

THIS DRONE MAPPING CLASS CAN LEVEL UP YOUR DRONE BUSINESS October 6, 2022 Sally French



There are a lot of people trying to make money in drones. You're a competent, talented pilot. You're free to fly drones for work on the side. And most pilots start with standard, visual images. But the real money is in enterprise and commercial work, like modeling and mapping. So how do you learn how to do that? Consider a drone mapping class.

The folks over at Drone Launch Academy, which is primarily known for its Part 107 test prep course, have launched an all-new drone mapping class dubbed "Drone Mapping And Modeling Fundamentals."

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And while the course is normally a still pretty affordable $399, Drone Launch Academy is offering Drone Girl readers an exclusive, $150 discount. Enter coupon code DRONEGIRLMAPS at checkout to get $150 off. That brings the $399 down to $249, and the discount should automatically apply with this link. https://www.thedronegirl.com/2022/10/13/drone-mapping-class-launch-academy/

Amazon to launch first of its Kuiper internet satellites on ULA rocket Christian Davenport October 12, 2022

An artist's rendering of the United Launch Alliance's Vulcan rocket launching from its Cape Canaveral, Fla., pad. (ULA)

The first two satellites of Amazon's space-based internet constellation will be launched early next year on the maiden flight of a new rocket being developed by one of the U.S. Space Force's biggest contractors.

In an announcement Wednesday, Amazon said it would hitch a ride on the new Vulcan rocket being developed by the United Launch Alliance, a joint venture of Boeing and Lockheed Martin.

The prototype satellites, part of Amazon's Kuiper system that would beam the internet to stations on the ground, were initially scheduled to launch by the end of this year with rocket start-up ABL Space Systems. But delays and the opportunity to launch with ULA, which was already contracted for 47 launches of satellites for Amazon, compelled the company to switch rockets, said Rajeev Badyal, the vice president of technology for Project Kuiper.

Amazon has permission from the Federal Communications Commission to put up 3,236 satellites, helping connect people without easy access to broadband as it seeks to compete with SpaceX's Starlink system. The company has pledged to invest more than $10 billion into a system it says will serve not only individual households but also schools, hospitals and businesses that do not have access to reliable broadband.
https://www.washingtonpost.com/technology/2022/10/12/amazon-internet-satellites-ula/

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DroneDeploy and BNSF on Autonomous Reality Capture Miriam McNabb October 12, 2022

At DJI AirWorks today, DroneDeploy took the stage with customer BNSF Railway, one of the largest freight railway networks in North America. James Pipe, DroneDeploy VP of Product and Nick Dryer, BNSF Senior Manger of UAS, discussed the future of autonomous reality capture.

BNSF uses drones for multiple uses – they began by inspecting bridges, a job which Dryer says is "absolutely terrifying" to do in the traditional manner, with an inspector hanging over the side. Dryer says the projects have evolved from simply gathering images on an SDK card to being able to generate AI-powered insights from 3D models.

Now, the company has widely adopted drone technology and is working with experimental, long-range hybrid aircraft to survey rail infrastructure – along with smaller, faster aircraft like the Mavic 3 that flies at 70 mph 30 – 40 feet over the tracks to gather different data. Data is pushed directly to DroneDeploy for processing, creating 2D and 3D models from which stakeholders throughout BNSF can get critical measurements and maintenance insights. Aerial data is used for security, inspections, damage assessments, and maintenance.

"In the very near future, I would say that every inch of our rail network will have been documented with high resolution aerial data," says Dryer.
https://dronelife.com/2022/10/12/dronedeploy-and-bnsf-on-autonomous-reality-capture-drone-mapping/

Drone Company Breaks Endurance Record with New UAS OCTOBER 11, 202 SHERRIE NEGREA

As a witness to the 9/11 attack, Fatema Hamdani, cofounder and CEO of Kraus Hamdani Aerospace, has often wondered whether smarter technology and information could have prevented the deaths that occurred that fateful day.

"One of the questions that stayed with me during that time was, 'Was there something we could have done in terms of data and intelligence that could have avoided that catastrophe and those lives being lost?'" recalled Hamdani, a

former partner at the consulting firm Ishi Systems, Inc. The firm had personnel engaged in a project at Marsh McLennan, an insurance company located at the World Trade Center.

Fifteen years later, when Hamdani partnered with entrepreneur Stefan Kraus to launch drone company Kraus Hamdani Aerospace, lessons she'd learned during 9/11 became key drivers for the company: using technology to solve problems and save lives.

The result is the K1000ULE (Ultra Long Endurance) solar-powered glider, which can fly non-stop for 26 hours, longer than any electric UAS in its size and weight category. The K vehicle is 10 feet long and 16 feet wide. Its altitude capability is up to 20,000 feet above mean sea level, and it can carry a payload of up to 7 pounds.

"The focus of the company is the ability to gather data and intelligence while providing communications services so that the gap between data, intelligence and decision-making can shrink and lives can be saved," Hamdani said. https://insideunmannedsystems.com/drone-company-breaks-endurance-record-with-new-uas/

Wisk Unveils Its 6th-Generation Autonomous eVTOL Aircraft Jessica Reed | October 7, 2022

Wisk Aero just revealed its 6th-generation air taxi, an autonomous electric vertical take-off and landing (eVTOL) aircraft. The company claims that this vehicle, which is its go-to-market aircraft, is the first autonomous eVTOL to be a candidate for certification by the Federal Aviation Administration. Wisk is headquartered in Mountain View, CA, and is backed by both The Boeing Company and Kitty Hawk Corporation.

The 6th-generation eVTOL aircraft has a proprietary 12-propeller design and boom configuration, according to the company's announcement, with improved propulsion systems.

Wisk is backed by Kitty Hawk Corporation, as well as The Boeing Company—which invested $450 million into Wisk at the beginning of 2022.

This sixth generation version of Wisk's eVTOL will have a 90-mile range, a cruising speed of 120 knots, and room for four passengers. Wisk is targeting a price of $3 per passenger per mile.

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Less than a month ago, Wisk released a concept of operations for urban air mobility (UAM) in partnership with Boeing. The two companies also collaborated with the FAA, NASA, Aurora Flight Sciences, and other industry partners to develop the UAM roadmap. https://www.aviationtoday.com/2022/10/07/wisk-unveils-6th-generation-autonomous-evtol-aircraft/?oly_enc_id=7021F0632090D7B

VPorts Announces Plans to Create Vertiport Networks, eVTOL Corridors Jessica Reed | October 10, 2022

Last month, Canadian startup VPorts shared plans to establish a network of vertiports in Quebec as well as to create corridors between Quebec and the U.S. specifically for electric vertical take-off and landing (eVTOL) aircraft. The company plans to start conducting eVTOL test flights along these corridors in 2023.

VPorts is planning to construct a vertiport network that connects all major Quebec regions by the year 2030. A longer-term objective is to build and operate 1,500 vertiports worldwide by 2045. This first vertiport network will provide take-off and landing locations for electric advanced air mobility (AAM) aircraft in addition to the necessary charging infrastructure. According to the company's announcement, each vertiport will have both charging stations and hydrogen fuel stations to accommodate hybrid and other types of AAM vehicles.

The company's initial growth strategy for its vertiport network in Quebec is centered around the regional transportation of goods as well as transporting patients, medical equipment, and organs for transplants. The team at VPorts will collaborate with NAV CANADA, Transport Canada, the Government of Quebec, and municipal officials to determine regulations for safety and security. https://www.aviationtoday.com/2022/10/10/vports-announces-plans-create-vertiport-networks-evtol-corridors/?oly_enc_id=7021F0632090D7B

RAPIDFLIGHT TO INVEST $5.5 MILLION, CREATE 119 NEW JOBS Thom Salo, Colonel USA (Ret) September 28, 2022

MANASSAS, VA - RapidFlight, a Virginia-founded integrated designer and manufacturer of unmanned aircraft, announced today it will invest $5.5 million to establish operations in the City of Manassas. The company's 25,000-

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square-foot facility at 9617 Center Street will house its headquarters and design and production operations. The project will create 119 new jobs.

"Virginia is uniquely positioned to lead the unmanned systems industry, and RapidFlight is on the cutting edge of developments in this innovative technology sector. We look forward to supporting the company's growth in the City of Manassas," said Governor Glenn Youngkin.

"By breathing new life into this facility, which has been a staple in Manassas for more than 40 years, we are excited to set the stage for the next evolution of unmanned systems." said Jay Gundlach, Ph.D., RapidFlight's Chief Executive Officer.

Assembled in 2021, RapidFlight is an integrated end-to-end unmanned aircraft systems provider. The company prides itself on its ability to aggressively respond to mission requirements and to dramatically reduce the time from concept to mission.
https://www.rapidflight.aero/media/virginia-unmanned-aircraft-manassas/

14Oct22

$250 PRIZE UAV COACH DRONE PHOTO CONTEST OFFERS MONEY October 13, 2022 Sally French

If you've got a stunning photo on your hands, this might be easy money in your pocket. That is, if you enter the UAV Coach drone photo contest.

The UAV Coach drone photo contest kicked off today, and the submission window isn't too long. You only have through Oct. 28 to get your entries in.

From there, a panel of judges featuring, yes, yours truly, will narrow the entries down to just the top five. And of the top five, YOU get to choose the ultimate winners. Between Nov. 4 and Nov. 7, the community will be able to vote on final winners. The winners of the UAV Coach drone photo contest will be announced on Nov. 9.

And there will be not just one, but three winners (one in each of the three categories) — each of which who will come away with a $250 Visa gift card. The runner up from each category will receive a $50 Visa gift card.

The three categories are:

1. Urban (city/architecture)

2. Nature (environment/landscapes)
3. Animals/People

The submission period is open now, and closes on Friday, Oct. 28. But you'll have to be selective, as you're only allowed one entry. https://www.thedronegirl.com/2022/10/14/uav-coach-drone-photo-contest/

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