UAS and SmallSat Weekly News

Contents

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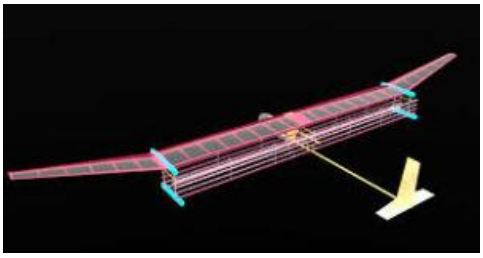
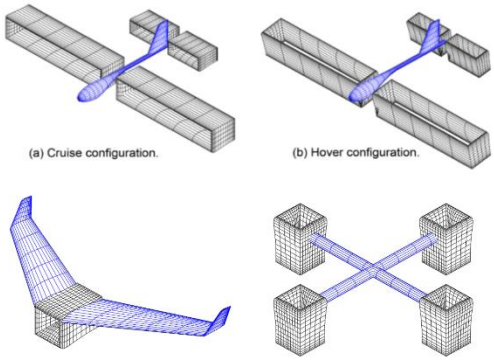
5Mar22

MIT New Technology Seeks to Make Drones Quieter using "Star Trek" Technology Posted By: staff November 23, 2018



MIT has just published a piece about a base level technology – one where a plane or drone can fly with no moving parts, no fossil fuel consumption, and be completely silent, being propelled by something called an "ionic wind". While not ready for implementation just yet, it is one of a number of technologies that may be used to build the drones of the future.



MIT engineers have built and flown the first-ever plane with no moving parts. Instead of propellers or turbines, the light aircraft is powered by an "ionic wind" — a silent but mighty flow of ions that is produced aboard the plane, and that generates enough thrust to propel the plane over a sustained, steady flight.

Unlike turbine-powered planes, the aircraft does not depend on fossil fuels to fly. And unlike propeller-driven drones, the new design is completely silent.

"This is the first-ever sustained flight of a plane with no moving parts in the propulsion system," says Steven Barrett, associate professor of aeronautics and astronautics at MIT. He expects in the near-term, such ion wind propulsion systems could be used to fly less noisy drones. Barrett and his team at MIT have published their results today in the journal *Nature*.
https://dronelife.com/2018/11/23/mit-new-technology-seeks-to-make-drones-quieter-using-star-trek-technology/ https://aviationweek.com/aerospace/advanced-air-mobility/mit-apply-ultra-quiet-propulsion-delivery-drone

NetJets Agrees to Buy and Operate 150 Lilium eVTOLs Charles Alcock March 3, 2022

Under a memorandum of understanding, fractional aircraft provider NetJets plans to add 150 Lilium eVTOLs to its fleet. NetJets has secured purchase rights for Lilium's six-passenger

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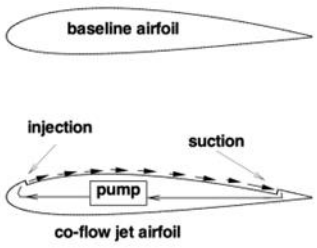
model, which could be operated in both the U.S. and Europe.

In a February 28 statement to investors, Germany-based Lilium said NetJets would operate the aircraft and might also become a flight operations partner for Lilium's planned service network in Florida and other locations. In November 2020, Lilium announced plans to provide eVTOL connections between larger cities in central and south Florida, built around a network of vertiports at locations such as the Lake Nona community near Orlando.

Lilium is aiming to certify its eVTOL and start commercial services in 2024. It has not said when it will start flight testing a preproduction prototype but has told investors it will release design data to its supply chain during the second quarter. The company is still flight testing a five-seat technology demonstrator of its ducted-fan, fixed-wing model.
https://www.ainonline.com/aviation-news/business-aviation/2022-03-03/netjets-agrees-buy-and-operate-150-lilium-evtols

CoFlow Jet signs JOA with NASA to commercialize eV/STOL deflected slip-stream technology 01 March 2022

CoFlow Jet, LLC, an engineering and technology company specializing in active flow control has entered a Joint Ownership Agreement with NASA to commercialize the deflected slip-stream technology enabled by co-flow jet flow control.



Jointly developed between NASA and CoFlow Jet, LLC., the technology would allow aircraft to take-off vertically, hover, smoothly transition to cruise and land vertically without using tiltrotors, tiltwings, or lift plus configuration. It would also combine vertical and short takeoff-landing (V/STOL), which facilitates aircraft to operate vertically within confined urban settings and further saves energy where there is a short runway space.

The basic concept is an active-flow control airfoil actuated by micro-compressors embedded inside the airfoil. A small amount of mass flow is drawn into the airfoil at the trailing edge, pressurized by the micro-compressor actuators and then injected near the leading edge tangential to the main flow.

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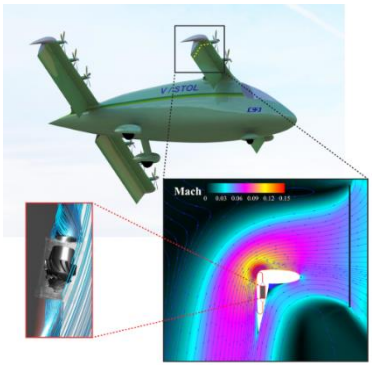
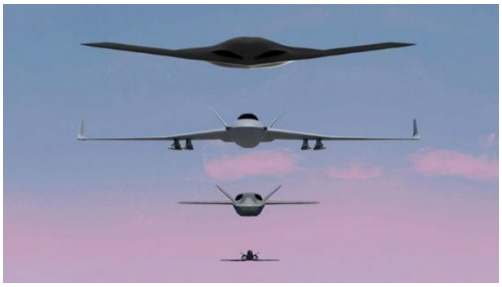


The vehicle is shown hovering with its flaps pointing downward and its propellers facing forward. The airflow from the propellers is turned vertically downward (see right inset) converting the entire thrust from the propellers to vertical lift. Unlike most of the current VTOL vehicles, the lift is generated without rotating the propellers upward. The 90 degree turn in the airflow is enabled by the coflow jet micro-compressors embedded in the flaps of all four wings.
https://www.greencarcongress.com/2022/03/20220301-cfj.html

GA-ASI Announces Evolution Class of UAS for the Future Fights of Tomorrow

March 4, 2022 Military | News



General Atomics Aeronautical Systems, Inc. (GA-ASI) is pleased to announce its new category of future-forward unmanned aircraft systems, focused on information dominance and airspace supremacy. Leveraging three decades of experience across millions of successful combat flight hours, the new Evolution line of advanced UAS joins GA-ASI's existing Predator-class and Mojave-class aircraft in delivering next-generation UAS that lead the pack in affordable, attritable and autonomous combat power.

The name Evolution refers to the path GA-ASI has followed as it chartered the realm of unmanned aircraft through its 30-year history of UAS innovation, designing for the future, and the force-multiplying power UAS provide modern warfighters. In the past three decades, GA-ASI has launched more than 25 UAS variants, beginning with the Gnat in 1992.

Evolution establishes a third aircraft class joining the well-known Predator® line and recently announced Mojave line of expeditionary UAS featuring short-takeoff and landing capability. Evolution includes the development of GA-ASI's next-generation UAS solutions designed to meet the needs of the U.S. Air Force's vision for its future force, as well as new UAS concepts such as Defender, Sparrowhawk and the recently announced Gambit.
https://uasweekly.com/2022/03/04/ga-asi-announces-evolution-class-of-uas-for-the-future-fights-of-tomorrow/?utm_source=rss&utm_medium=rss&utm_campaign=ga-asi-announces-evolution-class-of-uas-for-the-future-fights-of-tomorrow&utm_term=2022-03-04

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Volocopter Raises $170 million in First Signing of Series E Financing Round March 4, 2022 News

Volocopter, the pioneer of urban air mobility, has raised $170 million in the initial signing of its Series E funding round led by South Korean investor WP Investment, at a pre-money valuation of $1.7 billion. Composed of funds by new and existing investors, the money raised will assist with the certification of Volocopter's electric passenger air taxi and is expected to help achieve commercial launch in first cities worldwide.

Volocopter is developing new mobility options for cities around the world. With its family of aircraft (the VoloCity, VoloConnect, and VoloDrone), the company takes a unique approach by developing urban air mobility as an ecosystem. Having ten years of development experience, Volocopter is the clear leader in the urban air mobility space. As the first and only electric vertical takeoff and landing company to receive Design Organization Approval from the European Union Aviation Safety Agency, Volocopter has committed to launching commercial air taxi services in cities like Singapore, Rome, and Paris. https://uasweekly.com/2022/03/04/volocopter-raises-usd-170-million-in-first-signing-of-series-e-financing-round/?utm_source=rss&utm_medium=rss&utm_campaign=volocopter-raises-usd-170-million-in-first-signing-of-series-e-financing-round&utm_term=2022-03-04

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THE FIRST BVLOS DRONE FLIGHTS OF U.S. OIL REFINERIES HAVE BEGUN February 27, 2022 Sally French

Call 2022 the year of BVLOS. BVLOS is short for Beyond Visual Line of Sight and flying drones in this manner is crucial to unlocking a huge swath of commercial drone operations. And in 2022, the first BVLOS drone flights of U.S. oil refineries have begun.

Israel based "drone-in-a-box" drone solution provider Percepto this winter received Federal Aviation Administration approval to conduct BVLOS drone operations for Delek US Holdings' refineries located in both Tyler, Texas and El Dorado, Arkansas.

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Percepto, which was named one of Time Magazine's 100 Best Inventions of 2021, mainly focuses its efforts on using industrial robotics, including drones, for autonomous inspections. And in a partnership with Delek, Percepto drones are inspecting the company's facilities and providing visual data management and analysis. With the latest BVLOS approval, Delek US can now operate drones without a pilot to maintain line of sight with the drone. Instead, an operator located in a control room can manage and monitor pre-scheduled fully autonomous drone missions without necessarily needing to be near the drones. https://www.thedronegirl.com/2022/03/07/bvlos-drone-u-s-oil-refineries/

Wingtra Gives Away Drones for a Good Cause: The Wingtra Earth Day Challenge

Miriam McNabb March 06, 2022 by DRONELIFE Staff Writer Ian M. Crosby

VTOL drone company Wingtra is launching the Wingtra Earth Day challenge – a contest that will see the company award three winners with WingtraOne GEN II drones for environmental and humanitarian projects.

To apply, participants will be asked to describe their project or organization, explain how they would make use of the drone, and make a case for why their project deserves to win. Applications are due by March 31st, and nine nominees will be selected by an internal Wingtra jury and announced on April 7th. Wingtra will then hold a public vote of the nine finalists on LinkedIn from April 11th to 21st, with the three winners to be announced on Earth Day, April 22nd.

Wingtra encourages entry by those who are part of a non-profit organization, university, research institute or government agency, whose application directly contributes to the good of the planet, who have a clear vision of how they would use their WingtraOne GEN II and can explain it in practical detail, who agree to share videos, images and outputs with Wingtra for communication purposes and agree to be interviewed about their experience with the WingtraOne GEN II, and who will be able to do good for our planet.
https://dronelife.com/2022/03/06/wingtra-gives-away-drones-for-a-good-cause-the-wingtra-earth-day-challenge/

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DRONERESPONDERS: New Concepts for Public Safety UAS Education and Networking Miriam McNabb March 07, 2022

DRONERESPONDERS at XPONENTIAL 2022

AIRT will produce two new concepts –Conclave and Forum – for first responders using Drones For Good.

Since its inception in Spring 2019, DRONERESPONDERS has emerged as the leading non-profit voice dedicated exclusively to the support and advancement of unmanned aircraft systems use by public safety agencies and emergency services organizations across the U.S. Part of what has made DRONERESPONDERS so successful is their track record of forging strategic partnerships with key industry organizations to help advance the drone and robotic ecosystem beyond just the realm of public safety.

One of the most visible DRONERESPONDERS partnerships is between the Airborne International Response Team (AIRT), the 501(c)3 organization that serves as the official home of DRONERESPONDERS, and the newly renamed Association for Uncrewed Vehicle Systems International (AUVSI), the world's largest non-profit organization dedicated to the advancement of uncrewed systems and robotics.
https://dronelife.com/2022/03/07/droneresponders-at-xponential-2022-new-concepts-for-public-safety-uas-education-and-networking/

A-techSYN receives IAA approval to fly beyond visual line of sight in Ireland

March 4, 2022 Jenny Beechener UAS traffic management news, Urban air mobility

The Irish Aviation Authority has granted drone operator A-techSYN operational authorization approval for beyond visual line of sight operations under European Aviation Safety Agency (EASA) regulations.

The authorization was issued based on an application which was prepared implementing a SORA based risk analysis methodology defined by the Joint Authorities for Rulemaking on Unmanned Systems and applied by EASA regulations, which allows UAVs within the special category to perform BVLOS flights at approved Specific Assurance and Integrity Level levels.

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With this achievement, A-techSYN starts a new initiative to conduct periodic flights in 2022 with the purpose of training new UAV operators and performing proof of concepts on how to utilize the CGT50 VTOL UAV in everyday operations. https://www.unmannedairspace.info/latest-news-and-information/a-techsyn-receives-iaa-approval-to-fly-beyond-visual-line-of-sight-in-ireland/

Joint FAA and United Kingdom CAA Statement on eVTOL Aircraft March 7, 2022 FAA & Drone Laws

The Federal Aviation Administration and the United Kingdom Civil Aviation Authority recognize the potential of electric vertical take-off and landing (eVTOL) and other Advanced Air Mobility (AAM) aircraft to significantly benefit the public. To support future eVTOL aircraft development and operation, the US and UK civil aviation authorities are engaged in a range of discussions focused on facilitating certification and validating new eVTOL aircraft, production, continued airworthiness, operations, and personnel licensing.

As these aircraft enter the aviation ecosystem, we must continue to maintain the high safety standards that the public expects. To streamline and expedite integration, this technology should use existing regulatory frameworks on which that strong safety record is founded.

Both regulators recognize AAM is a collection of new and emerging technologies in the existing aviation system. Both authorities have a strong history of collaborating in aircraft certification, airspace integration, operations, and infrastructure, which lead to a safer, more sustainable sector. https://uasweekly.com/2022/03/07/joint-faa-and-united-kingdom-caa-statement-on-evtol-aircraft/?utm_source=rss&utm_medium=rss&utm_campaign=joint-faa-and-united-kingdom-caa-statement-on-evtol-aircraft&utm_term=2022-03-07

US Nuclear sends radiation-reading drone to shelled Ukraine atomic plant Bruce Crumley - Mar. 7th 2022

In the wake of the Russian shelling of Ukraine's enormous Zaporizhzhia nuclear power plant, contamination detection specialist US Nuclear Corp. says it is sending one of its specialized DroneRAD UAVs to Ukrainian authorities to help monitor the facility's reactors for potential radiation leaks.

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The move comes after invading Russian forces shelled the Zaporizhzhia nuclear plant – the largest in Europe – despite the obvious threats that posed not only to people in and around the southern city of Enerhodar, but also to the entire continent as well. Those troops eventually captured the compound, which produces a quarter of the country's electrical power and allowed managers to continue operating the facility. Though there are no signs of leaking from the reactors, US Nuclear responded to the international outcry by sending its radiation-detecting drone to help Ukraine officials monitor the situation as the conflict continues.

The US Nuclear's DroneRAD UAV being sent to Ukraine is equipped with a gamma ray search tool to locate radiating hotspots; it also has a beta-gamma air monitor to measure the air for dangerous airborne particulates. The gamma sensor can identify hotspots from either leaking radioactive materials or from solid sources such as both exploded and unexploded nuclear weapons and shrapnel. https://dronedj.com/2022/03/07/us-nuclear-sends-radiation-reading-drone-to-shelled-ukraine-atomic-plant/

UK Skybus project studies large eVTOL for mass UAM transport Bruce Crumley - Mar. 7th 2022

The Skybus study investigates the possibilities of flying a six-rotor, 30-person eVTOL craft as a mass-user urban air mobility (UAM) expansion of air taxi concepts. As such, the project has explored how those larger craft might operate alongside the smaller, usually three- to five-passenger vehicles being developed to offer on-demand inner-city air transport like air taxis. The main idea remains the same – lifting traffic now clogging the world's roads into the skies with emissions-free alternatives – but with Skybus aiming to do so in something closer to mass transit capacities.

The Skybus consortium is led by UK Tier 1 UAM platform airframe supplier GKN Aerospace in collaboration with Swanson Aviation Consultancy, Pascall+Watson, and Connected Places Catapult. The initiative was launched in 2021 and funded by the UK's Future Flight Challenge, a four-year, $165.5 million program promoting innovation in air transport operating within the UK Research and Innovation organization. Its objective is to "bring together technologies in electrification, aviation systems, and autonomy to create new modes of air travel and capability."

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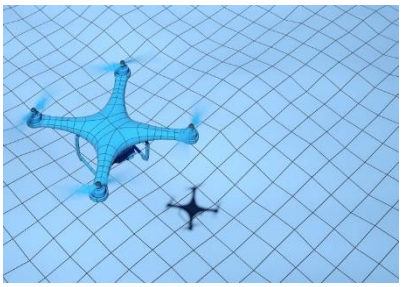
In its feasibility study, Skybus says it has identified significant opportunities for larger eVTOL craft to operate alongside air taxis in future UAM networks. To facilitate that, it has developed a Thames River-based vertiport concept, economic models, and demand forecasts for a London area intra-city use case. https://dronedj.com/2022/03/07/uk-skybus-project-studies-large-evtol-for-mass-uam-transport/

8Mar22

Counter drone market to reach $5,779 million by 2029 says Research and Markets report March 4, 2022 Jenny Beechener



The market is quickly expanding due to widespread public and military concern about the possible security compromise posed by unauthorized flying systems. Also, the use of anti-drone for professional and recreational purposes has skyrocketed, raising public and government worries about aerial attacks. Such risks have considerably aided the design of anti-drone defenses. Several public safety authorities and commercial establishments throughout the world are rapidly employing anti-drone technologies to meet the growing need for security.

Based on the end-use, the military & defense segment accounted for the leading share in the market in 2021. Countries are currently focusing on the importance of strengthening counter UAV system measures to monitor arsonist operations, which will increase demand for counter UAV systems in the near term. The increased interest in combating competitor military activities and drones or unmanned aerial vehicles information transporters is broadening revenue. https://www.unmannedairspace.info/latest-news-and-information/counter-drone-market-to-reach-usd-5779-million-by-2029-says-research-and-markets-report/

A FIREFIGHTING DRONE: FLYING OVER LIVE FLAMES and POST-FIRE FORENSICS

February 21, 2022 Sally French

Firefighting drones are flying over live fires while also being flown for post-fire analysis and forensics. In what was perhaps one of the most famous fires in recent history, drones were on hand at the tragic fire that engulfed Paris's treasured Notre Dame. Both DJI Mavic Pro and Matrice M210 drones were used to track the

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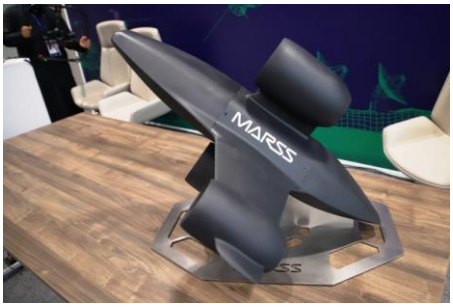
progression of the fire, provide live video feeds to firefighting teams, and help them determine the best spots to tackle the blaze. These days, 75% of public safety agencies say they are pursuing some sort of drone program, according to the Droneresponders 2019 Spring Data Survey.

They've been deployed in home fires, wildfires, and in factory fires. They're almost always better than helicopters because they're easier to maneuver and can automatically gather real-time data to help first responders make decisions. They're also much more cost-efficient (a number of firefighters use fairly straightforward, off-the-shelf drones that cost less than $2,000. https://www.thedronegirl.com/2022/03/08/firefighting-drone/

Killing enemy drones with a kinetic energy UAS; MARSS unveils its Interceptor 08/03/2022 *Paolo Valpolini*



At the World Defense Show in Riyadh the MARSS R&D team unveiled its Interceptor, a small UAV-killer that employs its kinetic energy to neutralize the opponent.

In the past, drones have sometime been destroyed using surface-to-air missiles when soft-kill measures proved insufficient, however an explosion over an urban area is unacceptable. And in the years to come a hard-kill solution might well become the standard, as killer-drones might become more and more autonomous, hence disrupting their data link with the ground control station might become a useless solution. The Monaco-based company with principal operations in the UK keeps an R&D and production unit in Saudi Arabia, drone attacks being one of the critical issues in the region.

On Day 2 of the Riyadh exhibition the company briefed the press on its new MARSS Interceptor. This is a high-speed drone, it flies up to 155 knots, around the double speed of Category 1 and Category 2 drones that MARSS intends to challenge with its new product. https://www.edrmagazine.eu/killing-enemy-drones-with-a-kinetic-energy-uas-marss-unveils-its-interceptor

Sikorsky Looks to Future with Matrix Mark Huber- March 7, 2022

In collaboration with the Pentagon's Defense Advanced Research Projects Agency (DARPA), Sikorsky Aircraft recently completed the first autonomous—and uncrewed—S-70 Black

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Hawk flight. The milestone mission last month lasted 30 minutes at the U.S. Army's Fort Campbell base in Kentucky.

The unmanned helicopter was part of DARPA's Alias—for Aircrew Labor In-Cockpit Automation System—program. Sikorsky's Matrix hardware and software autonomy technologies are at the heart of Alias, and Igor Cherepinsky, director of Sikorsky Innovations, is at the center of Matrix.

In addition to the military applications such as Alias, Cherepinsky sees Matrix as a game-changer for high-risk civil missions, including night-time aerial firefighting and over-water search and rescue (SAR). Lockheed Martin subsidiary Sikorsky is presently working with the FAA to certify the system, which uses a plethora of onboard sensors, lidar, and cameras mated to proprietary hardware and software.

The system comes with a kit that converts virtually any aircraft to varying degrees of add-on fly-by-wire control that Cherepinsky likens to "lane assist" on cars. "Depending on the type of steering it has, some cars do well with lane assistance and some cars do not so well," he said.
https://www.ainonline.com/aviation-news/general-aviation/2022-03-07/sikorsky-looks-future-matrix

FAA Seeks Comments on eVTOL Vertiport Designs Gordon Gilbert March 6, 2022

The FAA's Office of Airports is requesting comments on a draft engineering brief for vertiport and vertistop design standards to accommodate upcoming electric vertical takeoff and landing (eVTOL) aircraft. The deadline for comments on the brief is April 18, and the FAA will hold a virtual meeting on March 29 at 11 a.m. eastern time to discuss the draft and answer questions.

According to the FAA, the engineering brief is written specifically for vertical takeoff and landing aircraft powered with electric motors and using distributed electric propulsion, in contrast to propulsion systems built solely around an internal combustion engine. Development of the final standards will lead to an eVTOL vertiport design advisory circular anticipated to be released in 2024.

Alex Gertsen, National Business Aviation Association's director of airports and ground infrastructure, said "The initial guidance is the result of a multi-year effort for the FAA, during which the agency engaged with the NBAA and other stakeholders."

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https://www.ainonline.com/aviation-news/business-aviation/2022-03-06/faa-seeks-comments-evtol-vertiport-designs

UAS Angel Network Connecting Emerging Aviation Start-Ups with Capital

The UAS Angel Network is a collection of accredited individual investors, angel groups and seed funds focused on opportunities in the Unmanned Aerial Systems (UAS) and Advanced Air Mobility (AAM) industry. Subsectors of interest include:

- Drone Service Providers
- UAS logistics
- Airspace Management Systems
- UAS Flight Safety Systems
- Unmanned Traffic Management
- Droneports and Vertiports
- Commercialization of New UAS Technologies

The UAS Angel Network is hosted by the **Unmanned Aerial Systems Cluster Initiative** (UASCI), funded through a contract with the U.S. Small Business Administration.
https://www.uasangelnet.com/

Volatus Aerospace Makes Investment in Delta Drone to Solidify Global Drone Presence March 7, 2022 News

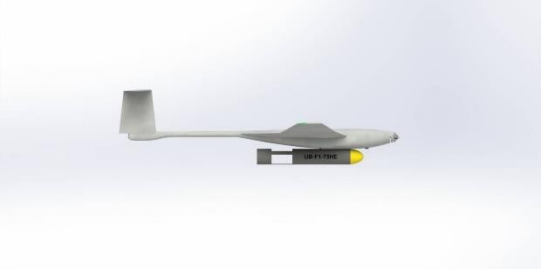
Volatus Aerospace announced the signing of a definitive agreement on March 3rd, 2022, to make a strategic investment in Delta Drone SA, a company based in Lyon, France, listed on the Euronext Growth Paris stock exchange. The maximum investment value will be €576,913, representing a 20% equity position in Delta Drone SA, with an option to increase the shareholding to 45% within 30 days from the Closing date with an additional investment amount not exceeding €721,142. The total investment will not exceed €1.30M. Volatus plans to fund this through its existing cash reserves.

Delta Drone is a fast-growing drone and robotics company with operations in France, Belgium, Australia, South Africa and Ghana and unaudited annual sales in 2021 of €16 million. Founded

in 2011, business activities include the design, manufacture and sale of specialized drone and robotics equipment, drones for industrial and event security services, training and commercial drone services with particular expertise in mining and agriculture..
https://uasweekly.com/2022/03/07/volatus-aerospace-makes-strategic-investment-in-delta-drone-to-solidify-global-drone-presence/?utm_source=rss&utm_medium=rss&utm_campaign=volatus-aerospace-makes-strategic-investment-in-delta-drone-to-solidify-global-drone-presence&utm_term=2022-03-08

Ukraine's mid-size Punisher drone is living up to its name against Russian forces

Bruce Crumley - Mar. 8th 2022



Among the large number of heroes in the Ukraine's determination to repel invading Russian armed forces is a mid-size, locally made drone known as the Punisher – something of a weaponized step-up vehicle from consumer craft to the formidable Turkish-built Bayraktar TB2 UAVs also being flown in the country's defense. As Team Putin might woefully attest, the pint-size Punisher has been living up to its name.

The punitive UAV is built by Ukrainian company UA Dynamics, which describes the vehicle as "reusable, fast, unexpected, precise, lethal." The firm's specs say the Punisher has a 4.4-pound "combat payload," 29-mile strike range, and 39 knots cruising speed. The Punisher has carried out at least 60 successful drone missions against Russian armed forces since they began their invasion – several with considerably outsize effects.

The craft are described as having a 7.5-foot wingspan, and capacities to fly at 1,300-foot altitudes for missions of up to three hours. That small size allows the UAV to get deep behind enemy lines with little risk of detection before or during strikes, then return for super-fast seven-minute redeployment servicing. That mix has reportedly allowed Punisher drones to furtively attack supply lines supporting Russian forces, strike trains transporting fuel to troops, and blast munition reserves.

As such, those UAVs have served as a bridge between the larger, fully militarized Bayraktar TB2 drones, and consumer craft that have been deployed in large numbers – and flowing in from foreign donors – in surveillance support of the Ukraine Army battling advancing Russian troops.

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Once aloft, the Punisher relies on an accompanying Spectre drone that performs reconnaissance work and identifies Russian targets to be struck. Once supplied with the designated coordinates, the Punisher lets fly with a single shot of its payload, or in three smaller charges fired on different objectives. https://dronedj.com/2022/03/08/ukraines-mid-size-punisher-drone-is-living-up-to-its-name-against-russian-forces/

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NetJets Set to Offer Fractional Shares in Lilium's eVTOL Charles Alcock March 8, 2022

Last week, NetJets agreed to add 150 Lilium Jets to its fleet of high-end business aircraft. Under a memorandum of understanding, the U.S.-based group has secured purchase rights for the all-electric model, which could be operated by NetJets and its affiliates. The aircraft is expected to enter service in 2024, offering a range of 155 miles at speeds of up to 174 mph.

On Tuesday, Lilium also announced that it will partner with FlightSafety International for pilot training. The company, which like NetJets is part of Warren Buffett's Berkshire Hathaway investment group, will provide courseware, mixed reality training devices, and crew training.

Lilium and NetJets expect to firm up the terms of their memorandum of understanding by the end of this year, to more precisely specify how their partnership will work. https://www.ainonline.com/aviation-news/business-aviation/2022-03-08/netjets-set-offer-fractional-shares-liliums-evtol

Dallas PD Drone Unit: After Years of Research, Department Takes Flight Miriam McNabb March 08, 2022 By Jim Magill

The UAS squad will operate as part of Dallas PD's Air Support Unit that supports patrol divisions and other investigative teams, Mike Igo, deputy chief of the department's tactical operations division, said in a blog post announcing the unit's formation.

The department will deploy 18 DJI drones, comprising various models, with each model designated for a specific set of tasks. Drones will be used in several operations, including search-and-rescue, disaster response, fugitive apprehension, building searches, and dealing

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with bombs and hazardous materials. The department will not use them for surveillance of individuals or overflights of private property without a search warrant.

Currently, the department has five Part 107-certified pilots assigned to the drone unit full-time. In addition, several officers in the SWAT division, who are also certified drone pilots, will fly the department's UAVs when the need arises in tactical situations.
https://dronelife.com/2022/03/08/dallas-pd-drone-unit-after-years-of-research-department-takes-flight/

US Navy to demo new MQ-8 Fire Scout mine countermeasure system March 9, 2022 Military | News

The US Navy is working to develop a new mine countermeasure (MCM) sensor suite for the MQ-8C Fire Scout that that will enable the unmanned helicopter to detect and localize mines and obstacles on land and at-sea.

The Fire Scout program office, in conjunction with the Office of Naval Research, Program Executive Office Unmanned and Small Combatants have partnered with the Naval Air Warfare Center Aircraft Division's AIRWorks, Aircraft Prototype Systems Division, Webster Outlying Field, and Air Test and Evaluation Squadron Two Four, to execute the final phase of the Single System Multi-Mission Airborne Mine Detection (SMAMD) Future Naval Capability Program.

SMAMD will be the first MCM system flown onboard the Fire Scout as well as the airframe's heaviest payload carried to date. The SMAMD system, developed by BAE Systems, utilizes an airborne optical sensor suite that will have the ability to have real-time onboard processing coupled with low false alarm rates that will enable the warfighter to respond swiftly to detected threats. Current MCM technologies require post-mission analysis that lengthens the threat detection and mitigation timeline. https://uasweekly.com/2022/03/09/us-navy-to-demo-new-mq-8-fire-scout-mine-countermeasure-system/?utm_source=rss&utm_medium=rss&utm_campaign=us-navy-to-demo-new-mq-8-fire-scout-mine-countermeasure-system&utm_term=2022-03-09

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187 DJI Mini 2 drones en route to Ukraine courtesy Dutch volunteer group

Ishveena Singh - Mar. 9th 2022

Eyes on Ukraine, a Dutch volunteer group, says it's bringing 187 DJI Mini 2 drones to Ukraine so "we all can see" what Russia is doing to the East European nation. The group says it will strive to get as many drones as possible in the air over Kyiv and all other places in Ukraine where fighting is going on "so the truth will not perish in this war."

To that end, Eyes on Ukraine has raised enough funds to procure 209 sub-250-gram Mini 2 drones to date. While 187 aircraft are already on the road en route to Ukraine, the others will become part of the second batch of drone donations.

If people are able to film on the spot with drones, we can all see what is happening. As a result, it will become much more difficult [for Russia] to deny attacks on civilian targets or the use of cluster bombs. Just last week, a group of Finnish volunteers hand-delivered 140 DJI Mavic Minis to the Ukrainian army by traveling to the conflict-ridden area via Poland.

While the Eyes on Ukraine team isn't revealing its live location for safety reasons, the group says it's willing to "drive back and forth as often as needed, until there are no more drones to buy, or when the Ukrainians indicate that their demand is met."
https://dronedj.com/2022/03/09/dji-mini-2-drone-ukraine-dutch-group/

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WING RECORDS MILESTONE 100,000 DELIVERY DRONE FLIGHTS WITHIN 6 MONTHS March 9, 2022 Sally French

How's this for insane growth? Just six months after crossing the milestone of making 100,000 delivery drone flights, Wing has now made a mind-boggling 200,000 commercial drone deliveries in its company history.

The company recently announced that — over the past six months — it completed 100,000 drone deliveries. That averages out to about 555 drone deliveries made per day. Some days are

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busier than others, and Wing said it once recorded more than 1,000 drone deliveries on a single day (that's a delivery every 25 seconds). The news comes after an August 2021 announcement that Wing had crossed its first 100,000 drone delivery milestone.

The 200,000 delivery point is fairly close with another big player in the drone delivery space. Zipline, which began operating in 2016, said in November 2021 that it had completed over 200,000 commercial drone deliveries, primarily carrying medical supplies. Both companies are far ahead of other competitors in the space. For context, Flytrex, which has done many high-publicity drone delivery stunts including a partnership with Domino's Pizza, says it has only delivered 12,000 items in 2021. https://www.thedronegirl.com/2022/03/10/delivery-drone-flights-wing/

Leonardo Signs Deal for Four AW609s Mark Huber March 9, 2022

Leonardo did not release a value of the order, but **AIN** estimates it could be worth $100 million.

The first production AW609 recently began ground testing in Philadelphia, and the second is currently being assembled there. To date, the program has logged more than 1,700 flight hours in the U.S. and Italy. Support and training packages primarily will be offered through the company's new training academy in Philadelphia that opened last year. It includes the first AW609 full-flight simulator.

Leonardo hoped to complete certification activities this year and make its first customer delivery in 2023. While declining to reveal the current size of the order book for the aircraft, Leonardo Helicopters managing director Gian Piero Cutillo said the company "had some orders" and that the aircraft had generated renewed market interest following the deployment of the fourth test aircraft on a promotional tour to Expo 2020 Dubai late last year.
https://www.ainonline.com/aviation-news/general-aviation/2022-03-09/leonardo-signs-deal-four-aw609s

Lilium seeks to lure private jet owners to eVTOL acquisitions Bruce Crumley - Mar. 10th 2022

Future urban air mobility aircraft won't simply be used for (relatively) affordable, carbon-free public transport like air taxis and other forms of aerial ride-sharing. Now next-generation craft

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developer Lilium is also looking to market its electric takeoff and landing (eVTOL) jet to the well-heeled elite as inner and inter-city supplements to their globe-spanning private planes.

Germany-based Lilium announced it has signed a memorandum of understanding with NetJets Inc., the world's largest private jet company, to buy up to 150 eVTOL craft for use by affluent clients. Under the agreement, Lilium planes would be configured to fly four to six passengers that NetJets will sell under shared-ownership arrangements to clients in the US and Europe. Under the agreement, NetJets will act as the flight operations partner for a network Lilium is building in Florida which it would hope to use as a US hub.

Armed with Lilium's quiet, emissions-free craft, NetJets is expected to offer the eVTOL planes as regional or urban complements to customers' longer-haul private jets. Obvious use cases would be flying posh passengers from airports where their jets touch down into city centers as well as within towns as a kind of aerial limo.

Given the specs of craft – which Lilium says is the first eVTOL jet in the world – its top speed of 190 mph and 190-mile range would also make it an ecological alternative to affluent users willing to leave their fuel-burning aircraft in the hangar for flights between cities.
https://dronedj.com/2022/03/10/lilium-seeks-to-lure-private-jet-owners-to-evtol-acquisitions/#more-77642

This drone by senseFly just made it to Pentagon's 'Blue UAS Cleared List' Ishveena Singh - Mar. 10th 2022

The Defense Innovation Unit, which operates under the Department of Defense to scale commercial drone technology across the US military, has unveiled the first drone to be fully authorized and approved under the Blue sUAS 2.0 program.

The company that has just passed the vetting required for onboarding policy-compliant, commercial, small uncrewed aircraft systems (sUAS) into the DoD is senseFly, a subsidiary of AgEagle Aerial Systems. And the first approved drone to be added to the DIU "Blue UAS Cleared List" as part of the Blue sUAS 2.0 project is the eBee TAC (*pictured above*). AgEagle acquired senseFly from Europe-based drone group Parrot for $23 million in October 2021.

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Aircraft added to this list do not require a DoD exception to policy to procure or operate. They have already undergone a stringent cybersecurity evaluation, an NDAA compliance check, and have been issued the necessary administrative documentation. As such, US government agencies can use these approved drones without worrying about data security breaches.
https://dronedj.com/2022/03/10/ebee-tac-drone-approved-blue-uas-list/#more-77615

11Mar22

BREAKING NEWS: FAA Releases BVLOS ARC Recommendations Miriam McNabb

March 11, 2022

The FAA has published the Advisory Rulemaking Committee (ARC) recommendations for flight beyond visual line of sight (BVLOS). The full, 222 page report can be read here.

FAA published the report last night. The drone industry has been expecting news on a proposed rulemaking for several months, as Administrator Steve Dickson promised publication "sometime before the end of the year" in his address at a drone conference earlier this year.

We're still unpacking the full report, and comments from stakeholders have begun to come in. In summary, however, the report makes five key recommendations for a BVLOS flight rule.

1. Take a "Risk-Based" approach to regulation.

2. Allow Automated "See and Avoid" Tools

3. Develop a new "BVLOS Rated" Remote Pilot license

4. Enable drones to be certified for BVLOS flight through an established process

5. Allow 3rd party participation in BVLOS operations.

https://dronelife.com/2022/03/11/breaking-news-faa-releases-bvlos-arc-recommendations/

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