



UAS and SmallSat Weekly News

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GA-ASI SeaGuardian Begins Operations for Japan Coast Guard October 20, 2022

Military | News



On October 19, 2022, the Japan Coast Guard commenced flight operations using an MQ-9B SeaGuardian® Remotely Piloted Aircraft (RPA) from General Atomics Aeronautical Systems, Inc. (GA-ASI). JCG is operating the SeaGuardian from the Japan Maritime Self Defense Force Air Station Hachinohe. The RPA will primarily perform Maritime

Wide Area Search (MWAS) over the Sea of Japan and the Pacific Ocean. Other missions will include search and rescue, disaster response, and maritime law enforcement.

SeaGuardian features a multi-mode maritime surface search radar with an Inverse Synthetic Aperture Radar imaging mode, an Automatic Identification System (AIS) receiver, and High-Definition – Full-Motion Video sensor equipped with optical and infrared cameras. This sensor suite enables real-time detection and identification of surface vessels over thousands of square nautical miles and provides automatic tracking of maritime targets and correlation of AIS transmitters with radar tracks. https://uasweekly.com/2022/10/20/ga-asi-seaguardian-begins-operations-for-japan-coast-guard/?utm_source=rss&utm_medium=rss&utm_campaign=ga-asi-seaguardian-begins-operations-for-japan-coast-guard&utm_term=2022-10-20

Airbus’ multi-mission “cargo copter” is put to the test during a robotic military exercise October 19, 2022 News



A sub-scale demonstrator of a future Airbus multi-mission unmanned aerial vehicle demonstrated its capabilities during a large robotic exercise organized last month by the Portuguese Navy and NATO, which brought together military forces, universities and selected industry partners.

By taking part in this exercise, the “cargo copter” operated in a dense robotic environment, validating the concept’s usefulness – particularly its modular design for easy, flexible, and rapid swap-out of payloads and batteries.



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The demonstrator was developed by Airbus’ UAS New Programs group in collaboration with the company’s X-Works rapid prototyping team. A system-of-systems approach was applied with the goal of meeting military mission requirements that range from cargo transportation and ISR duties (Intelligence, Surveillance, and Reconnaissance) to serving as a communications relay and a combat force multiplier.

Its validation occurred in highly realistic operational conditions during the REP(MUS)2022 military exercise, which was conducted in Portugal’s Troia Peninsula region from 12-23 September. Overall, REP(MUS)2022 brought together some **1,500 personnel** to test the coordination of unmanned systems and experimental mission scenarios above the water, on the water and under the sea. https://uasweekly.com/2022/10/19/airbus-multi-mission-cargo-copter-is-put-to-the-test-during-a-robotic-military-exercise/?utm_source=rss&utm_medium=rss&utm_campaign=airbus-multi-mission-cargo-copter-is-put-to-the-test-during-a-robotic-military-exercise&utm_term=2022-10-20

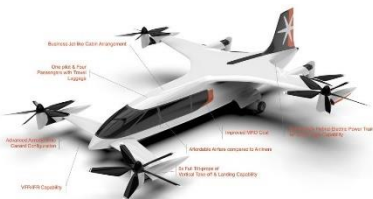
Advanced Air Mobility Startup Plana Raises \$9M in Pre-Series A Funding Jessica Reed | October 17, 2022



Korean startup Plana recently concluded its pre-series A funding round with a total of \$9 million. The company is developing a concept for a hybrid electric vertical take-off and landing (eVTOL) aircraft, targeting commercialization in 2028.

Companies including FuturePlay, Kibo Technology Fund, Schmidt, DSC Investment, Shinhan Asset Management, Dt& Investment, Industrial Bank of Korea, and Xenoholdings Asia all participated in the pre-series A fundraising round.

Plana’s hybrid electric aircraft will be powered by batteries and turbine generators. The eVTOL will be piloted and have capacity for up to six passengers. Maximum speed is expected to be 217 mph.



Plana's aircraft will have IFR/VFR capabilities, and it is designed with an advanced aerodynamic canard configuration.

The company plans to establish a branch in the U.S. this year to pursue certification with the Federal Aviation Administration. Plana is targeting 2025 for development of the full-scale



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prototype. A half-scale technology demonstrator is planned for 2023, and they expect to conduct the first flight in early 2024. https://www.aviationtoday.com/2022/10/17/advanced-air-mobility-startup-plana-raises-9m-pre-series-funding/?oly_enc_id=7021F0632090D7B

U.S. Border Patrol Purchasing Over \$1 Million in Drones from Red Cat Holdings

October 21, 2022 News



[Red Cat Holdings, Inc.](#), a provider of highly sophisticated and complex SUAS products for militaries globally, today announced that its subsidiary Teal Drones has been awarded a \$1,046,806 contract from U.S. Customs and Border Protection to provide Teal’s high-performance Golden Eagle drones to U.S. Border Patrol.

The award is part of a Blanket Purchase Agreement (BPA) between U.S. Customs and Border Protection and **five drone companies**, announced in December 2021, which has a total estimated value of **\$90 million over a five-year period**. All drones covered by the BPA are on the exclusive “Blue UAS” list of drones approved for purchase by the Department of Defense.

The drones will provide supplemental airborne reconnaissance, surveillance, and tracking capability to enhance situational awareness for field commanders and agents in areas that lack nearby traditional surveillance systems or available manned air support.

The \$1 million+ basic purchase agreement covers provision of Teal’s Golden Eagle drone plus battery packs and chargers, propellers, gimbal-mounted cameras, carrying cases and operator training sessions, including “train-the-trainer” sessions. https://uasweekly.com/2022/10/21/u-s-border-patrol-purchasing-over-1-million-in-drones-from-red-cat-holdings/?utm_source=rss&utm_medium=rss&utm_campaign=u-s-border-patrol-purchasing-over-1-million-in-drones-from-red-cat-holdings&utm_term=2022-10-21

Textron Systems awarded contract for U.S. Navy Expeditionary Sea Base shipboard UAS

October 21, 2022 Military | News



Textron Systems Corporation announced today it has been awarded a contract valued at up to **\$22 million** by the U.S. Navy’s Naval Air Systems Command (NAVAIR) to provide UAS operational support to the USS Miguel Keith, designated ESB-5. The contract begins in FY23 and has a total potential



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performance period of **five years**. This award builds on the four-year extension of USS Hershel “Woody” Williams (ESB-4) earlier this year and joins two DDG-class ships, bringing the total number of U.S. Navy ships supported by the Aerosonde® UAS system to **four**.

Under this contract, Textron Systems will deploy its Aerosonde UAS to provide extended range intelligence, surveillance, and reconnaissance (ISR) services with enhanced mission payloads aboard the ESB-5. The company’s Field Service Representatives will work alongside the sailors onboard to provide support for a variety of maritime missions.

The Aerosonde system has amassed more than **585,000 flight hours** while serving multiple U.S. and international allies. It is designed for expeditionary land- and sea-based operations in austere environments and is equipped for multiple payload configurations.

https://uasweekly.com/2022/10/21/textron-systems-awarded-contract-for-second-u-u-navy-expeditionary-sea-base-esb-shipboard-uas-operation/?utm_source=rss&utm_medium=rss&utm_campaign=texttron-systems-awarded-contract-for-second-u-u-navy-expeditionary-sea-base-esb-shipboard-uas-operation&utm_term=2022-10-21

May the Force Be With U: American Actor, Mark Hamill, Becomes Fundraising Ambassador 29 September 2022



Mark Hamill, known for playing the iconic hero Luke Skywalker, has become an ambassador for the UNITED24 fundraising platform. He will support the **Army of Drones** project.

The new ambassador introduction took place during an online call with the President of Ukraine. Volodymyr Zelenskyy expressed his gratitude to Mark Hamill for supporting Ukrainian people since the beginning of the full-scale Russian invasion of Ukraine.

"In this long and unequal fight, Ukraine needs continuous additional support. That's why I was honored President Zelenskyy asked me to become an ambassador for the Army of Drones," said Mark Hamill.

The "Army of Drones" project is a complex program of the fundraising platform UNITED24, the General Staff of the Armed Forces, the Ministry of Digital Transformation, and the State Special Communications Service, which provides for the regular procurement of drones, their repair and prompt replacement, as well as a pilot training. Thanks to the contributions to the Army of



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Drones, the Armed Forces of Ukraine have already received **986 UAVs**.

<https://www.president.gov.ua/en/news/may-force-be-u-amerikanskij-aktor-mark-gemill-stav-ambasador-78141>

FAA OKs BVLOS drone flights across entire NUAIR UAV corridor Bruce Crumley - Oct. 21st 2022



The [Northeast UAS Airspace Integration Research Alliance](#) (NUAIR) received approval from the [Federal Aviation Administration](#) (FAA) this week to operate [beyond visual line of sight](#) (BVLOS) drone flights across the entire expanse of its **50-mile corridor** in central New York.

The news was so important to NUAIR’s work in developing activity within its [drone corridor](#) that the **New York governor**, Kathy Hochul, [made the announcement](#) of the FAA’s BVLOS ruling, which simultaneously benefits the state’s push to become a leader in drone and [advanced air mobility](#) (AAM) operation and systems.

In addition to the other testing capabilities the FAA decision permits, it allows [NUAIR to operate BVLOS UAV flights](#) between Griffiss International Airport in Rome, NY, and Syracuse International Airport.

NUAIR is expected to use the [FAA’s authorization](#) to fully demonstrate the various ways BVLOS flights will enhance the operational and economic advantages of enterprise drone activity, as well as other [AAM craft transporting passengers and cargo](#).
<https://dronedj.com/2022/10/21/nuair-drone-bvlos-faa/>

23Oct22

‘We Heard It, We Saw It, Then We Opened Fire’ Andrew E. Kramer Oct. 23, 2022

With an intense, hastily assembled effort, the Ukrainian military is pioneering successful techniques in the difficult art of anti-drone warfare.



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Police officers in Kyiv, Ukraine, trying to shoot down a drone during an attack on Oct. 17. The drone was believed to be an Iranian-made Shahed-136, purchased by Russia in August.

KYIV, Ukraine — Shooting down noisy, propeller-driven Iranian-made drones is a frustrating business and harder than it might seem. It takes multiple actors on the ground and in the air working closely together for 24 hours a day.

Currently, it consists of three layers of protection: fighter jets that patrol around the clock; ground-fired anti-aircraft missiles; and teams of soldiers with machine guns who try to shoot the drones down as they fly past.

The **hardest part is simply finding the drones**, Juice said. On radar, the small, plodding drones can be confused with migrating birds or trucks on a highway. Ground controllers identify potential targets and direct jets to intercept them, but often the pilots come up empty.



Despite the hurdles, the Ukrainian military is now routinely shooting down more than **70 percent** of the Shahed-136 drones Russia purchased from Iran in August, Yuriy Sak, an adviser to the Ukrainian minister of defense, said in an interview.

Ukraine shot down the first such drone in the country's east on Sept. 13 and has since downed at least **237**, the Ukrainian military said in a statement last week. "We are trying to quickly adapt to the new reality," Mr. Sak said.

<https://www.nytimes.com/2022/10/23/world/europe/ukraine-russia-drones-iran.html>

24Oct22

ALPHABET'S WING EXPANDS TO IRELAND WITH SMALL DEMO PROJECT October 21, 2022 Sally French



Alphabet, the parent company of Wing, announced this week that Wing is set to conduct a small-scale demonstration of a drone delivery operation near Dublin, Ireland, sometime in the coming weeks.



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The delivery is set to happen in Lusk, located 20 kilometers north of the city of Dublin. But unlike some of the flashy drone delivery launches that other companies have promised, Wing is keeping expectations relatively low.

“To be clear, this is a first small step for Wing in Ireland and will look different from the commercial services we now operate in Finland, Australia and the United States,” Wing said in a statement. And Wing is taking small steps indeed. Later this week, Wing will host a public community meeting to get buy-in from neighbors. Wing promises it will be “the first of many outreach events leading up to our service launch in Lusk.”

<https://www.thedronegirl.com/2022/10/24/alphabets-wing-ireland-drone-delivery/>

India launches 36 internet satellites delayed by Ukraine war October 22, 2022



NEW DELHI (AP) — India launched a rocket carrying **36** private internet satellites on early Sunday, stepping in to keep the orbital constellation growing after a monthslong interruption related to the war in Ukraine.

The liftoff from southern India was the first launch for London-based OneWeb since breaking with the Russian Space Agency in March because of Moscow’s invasion of

Ukraine.

“We have accomplished the orbit very accurately, now the rocket is in its intended orbit,” said S. Somanath, the chairperson of India’s space agency. He said 16 satellites were put into orbit and expressed optimism that “the remaining 20 satellites will get separated as safely as the first of the 16.”

OneWeb now has **462** satellites flying — more than 70% of what the company said it needs to provide broadband services around the world. Despite this year’s disruption, OneWeb said it remains on track to activate global coverage next year with a planned constellation of **648** satellites. It’s already providing service in the northernmost latitudes. Each OneWeb satellite weighs about 330 pounds (150 kilograms). <https://apnews.com/article/space-launches-russia-ukraine-science-business-government-and-politics-8e8ff98ea173237b493f54aec54626dc>



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What Drones Do US Border Patrol Use? Teal Drones Wins \$1 M Contract for Golden Eagle

Miriam McNabb October 21, 2022 by DRONELIFE Staff Writer Ian M. Crosby



Today, drone-based product and solution provider [Red Cat Holdings](#) announced that U.S. Customs and Border Protection has awarded Red Cat subsidiary [Teal Drones](#) a **\$1,046,806** contract to provide Teal's [Golden Eagle](#) drones to U.S. Border Patrol.

This new contract is part of a Blanket Purchase Agreement (BPA) between U.S. Customs and Border Protection and five drone companies announced last December. The BPA has a total estimated value of **\$90 million over a five-year period**. All drones included in the agreement are on the Department of Defense's "Blue UAS" list, denoting drones approved for purchase and operation by the Department and related government entities.

The Golden Eagle drones will offer additional airborne reconnaissance, surveillance, and tracking abilities to improve situational awareness for field commanders and agents in locations without traditional surveillance systems or available manned air support.

<https://dronelife.com/2022/10/21/what-drones-do-us-border-patrol-use-teal-drones-wins-1-m-contract-for-golden-eagle/>

Drones for Marine Wildlife Detection: TEKEVER Develops New Deep Learning Capability

Miriam McNabbon: October 21, 2022 by DRONELIFE Staff Writer Ian M. Crosby



Advanced unmanned aerial systems leader [TEKEVER](#) has developed a new deep learning ability for its Unmanned Aerial Vehicles to autonomously gather marine wildlife data.

Presently used to facilitate marine conservation and research, the technology can support environmentally friendly business practices at sea through supplying intelligence on the presence of marine species at risk.

TEKEVER was able to alter its AI model and trained algorithms for the detection of various types of marine wildlife, such as whales and dolphins.

TEKEVER can detect whales through their thermal signature, along with visual target detection utilizing statistical image analysis allows for the detection of pods of dolphins.



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TEKEVER has also partnered with CLS Group (Collective Localization Satellites) to support the Italian Coast Guard through the deployment of its AR5 unmanned fixed wing aircraft to monitor whale migration and merchant vessels in the 84,000 square kilometer Pelagos Sanctuary, a protected marine area located between Italy, Monaco, and France.

<https://dronelife.com/2022/10/21/drones-for-marine-wildlife-detection-tekever/>

MissionGO Signs \$50 Million UAS Inspection Partnership with Southern California Edison October 21, 2022 News



[MissionGO Unmanned Systems](#) announced a partnership providing UAS inspection services to Southern California Edison, the largest subsidiary of Edison International and primary electricity supply company for much of Southern California.

Throughout the last several years working with Southern California Edison, MissionGO’s UAS inspection team performed over 6,500 sorties and catalogued more than 1,200 hours of flight time. The team reviewed and captured data from 20,000 distribution poles and 4,000 transmission poles with zero incidents. These flight operations have prevented wildfires and given Southern California Edison the time needed to prioritize and repair infrastructure to keep the community safe.

After a rigorous vetting and demonstration process, MissionGO was selected as one of two companies to secure this new contract with Southern California Edison. The contract includes nearly **160,000 poles to be inspected and is estimated at \$50 million over the next 3 years, one of the largest UAS services contracts in the world.** https://uasweekly.com/2022/10/21/missiongo-signs-3-year-50-million-uas-infrastructure-inspection-partnership-with-southern-california-edison/?utm_source=rss&utm_medium=rss&utm_campaign=missiongo-signs-3-year-50-million-uas-infrastructure-inspection-partnership-with-southern-california-edison&utm_term=2022-10-24

Everdrone recognized as top innovator and widens the scope October 24, 2022



Everdrone joins the exclusive list of top innovators to have made the list of Ny Teknik’s Top 33 Most Promising Tech Companies in Sweden – for the third time.

“We are truly honored to have made it onto the list not once, but three times, alongside giants like Spotify and iZettle”, says



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Mats Sällström, CEO of Everdrone.

Everdrone's revolutionary First on Scene AED Solution, using autonomous drones to deliver defibrillators to out-of-hospital cardiac arrest patients, is presently operational in Sweden and Denmark, reaching a total of 340,000 people. For an in-depth look into how a First on Scene AED operation is performed, a video showing the entire operation is now available.

https://uasweekly.com/2022/10/24/everdrone-recognized-as-top-innovator-and-widens-the-scope/?utm_source=rss&utm_medium=rss&utm_campaign=everdrone-recognized-as-top-innovator-and-widens-the-scope&utm_term=2022-10-24

New York drone corridor receives approval for BVLOS flights across 50 miles of airspace October 20, 2022 Jenny Beechener UAS traffic management news, Urban air mobility



The US Federal Aviation Administration (FAA) has approved the New York Unmanned Aircraft Systems Test Site for beyond visual line of sight (BVLOS) drone flights across the entire 50 miles of airspace within New York's Drone Corridor. This flight authority will give NUAIR, the corridor operator, the ability to fly civilian

drones from Syracuse International Airport to Griffiss International Airport in Rome without the need of visual observers.

State Governor Kathy Hochul also announced that the state will be providing NUAIR with an **additional \$21 million** in CNY Rising Upstate Revitalization Initiative funding to cultivate the world leading UAS industry hub along the corridor in Central New York and the Mohawk Valley. The project will allow for critical infrastructure to be tested and deployed to enable advanced industry applications, state agency adoption of UAS, and associated workforce development.

New York State's uncrewed aircraft systems Test Site, owned by Oneida County, is one of only seven Federal Aviation Administration-designated uncrewed aircraft systems test sites in the nation. <https://www.unmannedairspace.info/latest-news-and-information/new-york-drone-corridor-receives-approval-for-bvlos-drone-flights-across-50-miles-of-airspace/>

25Oct22

Drones Deliver Defibrillators –Everdrone Honored as Top Innovator Miriam

McNabbon: October 24, 2022 by DRONELIFE Staff Writer Ian M. Crosby

For the third time, autonomous drone technology leader [Everdrone](#) has made the list of Ny Teknik's Top 33 Most Promising Tech Companies in Sweden.



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[Everdrone's First on Scene AED Solution](#) utilizes autonomous drones to deliver defibrillators (AED) to out-of-hospital cardiac arrest patients. The solution currently sees use in Sweden and Denmark, where it has served a total of 340,000 people.

“We are truly honored to have made it onto the list not once, but three times, alongside giants like Spotify and iZettle”, said

Everdrone CEO Mats Sällström. “We also hope that this recognition brings awareness of how drones in general can be used to save lives and provide safety in society.”

<https://dronelife.com/2022/10/24/drones-deliver-defibrillators-everdrone/>

New Cargo UAV Completes First Flight with Record-Breaking 829-Pound Payload

Phoebe Grinter / 18 Oct 2022



Sabrewing Aircraft Company, Inc.'s RH-1-A Rhaegal VTOL air cargo drone has achieved its first hover flight while lifting a record-setting payload of **829-pound payload**, shattering the previous world record for the 'dead-lift' of any commercial, vertical takeoff UAV.

Improvements to the blades, ducts, and shape of the shroud of the aircraft's ducted fans allowed each duct to produce **30% more thrust** than it was originally designed to provide.

The pre-production prototype aircraft weighed just over 2,700 pounds for the first flight and is capable of a maximum gross weight (with payload) of up to **3,100 pounds** at altitudes up to 22,000 feet and 200 knots. When taking off conventionally, this aircraft has enough thrust to carry over 2 tons of cargo with the same range, altitude, speed, and efficiency.

“This is only a fraction of what this aircraft can carry. But it proves that we're able to lift more cargo on our maiden flight than any previous cargo UAV that has ever flown,” said Ed De Reyes,

chairman and CEO of Sabrewing. https://www.unmannedsystemstechnology.com/2022/10/new-cargo-uav-completes-first-flight-with-record-breaking-829-pound-payload/?utm_source=UST+eBrief&utm_campaign=2cb30dcf13-ust-ebrief_2022-oct-25&utm_medium=email&utm_term=0_6fc3c01e8d-2cb30dcf13-111778317&mc_cid=2cb30dcf13&mc_eid=acabe18a61

https://www.unmannedsystemstechnology.com/2022/10/new-cargo-uav-completes-first-flight-with-record-breaking-829-pound-payload/?utm_source=UST+eBrief&utm_campaign=2cb30dcf13-ust-ebrief_2022-oct-25&utm_medium=email&utm_term=0_6fc3c01e8d-2cb30dcf13-111778317&mc_cid=2cb30dcf13&mc_eid=acabe18a61



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DroneUp joins Utah's AAM working group on future policies and operations

Bruce Crumley - Oct. 25th 2022



[DroneUp](#) said its involvement in studying and strategizing policies affecting [future AAM activity](#) will take place within the state's Department of Transportation's aerial consultation initiative called the Division of Aeronautics Utah Advanced Air Mobility Working Group. The objective will be to [anticipate and manage](#) passenger

and freight transportation that AAM aircraft and services will offer and maximize the user benefits and economic growth potentials they will create.

One of the main focuses in DroneUp's AAM work in Utah will be assisting with the creation of an [automated system to orchestrate](#) increasing air traffic and providing safe flight management that will plan, request clearance, and factor in potential hazards and airspace restrictions to its routine operation.

It's likely that will include DroneUp's Airspace Solutions, which enhances safety by permitting pilots of drones and AAM craft to publish their flight plans and, thereby, have a clear, shared idea of where other vehicles in the same areas will be operating.

By tapping into DroneUp's [varied activities in drone services](#), Utah officials believe they can capture more of the benefits AAM will offer. Objectives for those services include connecting underserved communities, providing safe, quiet, affordable transportation of goods, offering lifesaving technology, and reducing carbon emissions. <https://dronedj.com/2022/10/25/droneup-aam-utah/#more-87924>

Wing drone delivery to Coles' Gold Coast clients brings store-to-home service to

Oz [Bruce Crumley](#) - Oct. 25th 2022



[Wing](#) continues to build on its [drone delivery](#) momentum in its Australia – its most vibrant market thus far – with the launch of what it calls **the first store-to-home service in the Gold Coast** area in partnership with supermarket chain Coles.

The activity is set to begin November 2 in the northern suburbs of Ormeau, Ormeau Hills, and Yatala, where clients can expect to receive items bought remotely in just minutes.



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The new format will transport popular grocery items including bread, fresh produce, convenience meals, snacks, healthcare items, and household essentials directly from Coles' Ormeau Village Shopping Centre store – doubling the products [ready for delivery](#) to about 500.

Its eagerness to innovate in Australia reflects the nation's status as [Wing's biggest](#) and most enthusiastic [drone delivery](#) market. Last year the company transported orders to more than 100,000 Aussie clients and had already **surpassed the 120,000 mark in the first nine months** of 2022. <https://dronedj.com/2022/10/25/wing-coles-drone-delivery/#more-87909>

POWER Aims to Create Revolutionary Power Distribution Network October 24, 2022 Military | News



DARPA is working on the next leap forward in energy distribution by leveraging wireless power beaming to create a dynamic, adaptive, speed of light wireless energy web. The goal of the Persistent Optical Wireless Energy Relay (POWER) program is to design and demonstrate airborne optical energy relays. These relays are a critical component

necessary to allow ground-sourced lasers to be coupled with high-altitude, efficient long-range transmission.

“This is **the internet for energy** – harnessing resilient, multipath networks to flow energy from abundant sources to energy-starved consumers,” said [Col Paul Calhoun](#), POWER program manager in DARPA's [Tactical Technology Office](#). “We often must operate far from established energy infrastructure and rely on liquid fuels that require precarious supply lines.”

Current military platforms that require long range, endurance, or significant weapons delivery capability must be physically large to carry the stored energy needed to complete a mission as liquid fuel. A wireless power transfer network transforms platforms into conduits rather than containers, which enables small inexpensive platforms with significant capabilities such as unlimited range or endurance. https://uasweekly.com/2022/10/24/power-aims-to-create-revolutionary-power-distribution-network/?utm_source=rss&utm_medium=rss&utm_campaign=power-aims-to-create-revolutionary-power-distribution-network&utm_term=2022-10-25



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26Oct22

A Drone and Wearable Sensor Solution Locates Firefighters in a Burning Building

Miriam McNabb October 25, 2022 DAVID HOLT



Researchers from [George Mason University](#) are working on a drone and wearable sensor solution that can locate each firefighter working in a burning building – and notify their team if they're in trouble.

Drones equipped with thermal and RTK imaging solutions are used heavily in firefighting, providing scene commanders with situational awareness and important thermal data that can help identify hotspots or areas likely to reignite. Aerial data can help with managing evacuations by understanding which roads are still accessible, distributing resources efficiently, and documenting the fire's progress.

Now, [Vijay Shah, an assistant professor in the Cyber Security Engineering Department](#) in the College of Engineering and Computing at George Mason University is working to develop a tool that will **locate and protect firefighters** while they are working. Drones surrounding a fire will receive signals from wearable sensors on the firefighters: locating each individual for the commander to improve utilization of resources and direct firefighters to safer positions if required. If a firefighter has not moved in a certain amount of time, the system alerts the commander that a team member may need rescue.

The project, "5G Indoor Positioning System" is funded by the National Institute of Standards and Technology and is part of a collaboration with Virginia Tech and the Arlington Virginia County Fire Department. Arlington firefighters will begin testing the technology starting in 2025. <https://dronelife.com/2022/10/25/drone-and-wearable-sensor-solution-locates-firefighters-in-a-burning-building/>

Cyber takedown – the next generation of more effective counter-UAS

technology Philip Butterworth-Hayes A White Paper from www.unmannedairspace.info
September 2022



One of the biggest hurdles facing agencies responsible for counter-uncrewed air systems (C-UAS) operations is the large and ever-expanding number of competing technologies and companies now

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com



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active in the market. The Unmanned Airspace Global Counter-UAS Directory and Buyer's Guide (<https://www.unmannedairspace.info/counter-uasindustry-directory/>) lists more than **300** systems aimed at locating, identifying, classifying, and then mitigating the threat of rogue UAS, or drones. Some of these systems do what their proponents claim but most do not. So how does a purchasing organization start to understand what technology types, either alone or in partnership – and then which contractor – offer the optimal solution to its particular challenge?

The first problem is to understand the nature of that challenge, and this may be far more complex than at first seems. Both civil and military agencies face a complex series of dynamic drone threats. These range from very high-altitude military drones armed with precision strike weapons to low-level swarms of small kamikaze drones; from small, readily available commercial UAS drones equipped with a variety of deadly payloads to home-built “autonomous” systems which do not rely on GNSS or communications links but are pre-programmed. And sometimes drones that have just lost their way...

<https://www.unmannedairspace.info/wp-content/uploads/2022/09/White-paper-Cyber-take-over-benefits.pdf>

Check out video footage of XPeng AeroHT's flying car completing its maiden flight Scooter Doll Oct. 26th 2022



XPeng's flying car prototype completed its maiden flight and has the receipts to prove it. You've gotta see this.

Earlier this week, we delivered [a recap of XPeng's annual 1024 Tech Day](#), where the company introduces new and upcoming products and services, while teasing some of the advanced technologies it's developing for the future. For a second year in a row, XPeng's urban air mobility (UAM) division AeroHT stole the show with its flying car prototype.

The company also shared that the overall system design complexity of the eVTOL had been reduced to ensure better safety and reliability during flights. Better yet, a prototype had been built and had completed its maiden flight.

Today we have gotten our hands on footage of the maiden flight, and it's unlike anything we've ever seen before, although it's not without its journalistic skepticism and future safety concerns. **Check it out below.** <https://electrek.co/2022/10/26/check-out-video-footage-of-xpeng-aerohts-flying-car-completing-its-maiden-flight/>



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UK's Network Rail drones cut costs, delay times from trespassers on train tracks

Bruce Crumley - Oct. 26th 2022



After previous trials going back to 2018, Network Rail [said this week](#) that units of the British Transport Police have begun piloting drones over sections of track in the eastern part of England to first spot, then get to and clear intruders from the off-limits areas.

Police units are [flying drones](#) equipped with HD, high-powered zoom lenses and thermal imaging sensors to detect unauthorized people near rail lines, or pinpoint those that have been identified by other means. Fixing the exact location of trespassers allows other law enforcement personnel to reach them faster and reduce the amount of time that train activity is cut when intruders are determined to be present around rolling stock infrastructure.

During its last full accounting year that began in April 2021, the company recorded 1,105 cases of trespassing that generated 48,702 minutes of train delays, at a cost of just over \$4 million. Since April of this year, 572 intrusions have resulted in 21,021 delay minutes, worth about \$1.5 million.

To help minimize, if not eliminate that, Network Rail is pursuing its use drones to patrol and [police its tracks](#) as a faster and more efficient means of keeping tracks free of trespassers. <https://dronedj.com/2022/10/26/network-rail-drones-trespassers/#more-87961>

Ukrainian Defense Minister on Russian Drones and What is Needed to Defeat Them

Miriam McNabb October 26, 2022



Russian drone shot down in Ukraine, April 2022

At the [AUVSI NE UAS and AAM Summit](#) today, attendees heard a pre-recorded session of the Honorable Volodymyr Havrolov, the Ukraine Deputy Minister of Defense. He said Russia's partial mobilization announced September 21, 2022 is significant. "This action indicates desperation. There is no way for Russia to stop us."

Russia lost most of its modern equipment in the first phase of the war, said Havrolov, and they are not able to replace that equipment because the equipment relies heavily on foreign resources. "This war will be only won through technological superiority."



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There is clear evidence that Iran is supplying drones and loitering munitions to Russia. Loitering munitions, sometimes referred to as kamikaze drones, can “loiter” after deployment until a human operator on the ground decides the time is right to strike a target. That gives them greater flexibility, but they are designed to be single use. Supplies can be rapidly depleted.

Added to the problem is Russia’s ability to jam Ukrainian drones. “We would like to have UAS systems in our inventory that can operate in the air defense environment,” said Havrolov. We need drones that can operate in a jamming environment, and you have many of these in the United States.” <https://dronelife.com/2022/10/26/ukrainian-defense-minister-on-russian-drones-and-what-is-needed-to-defeat-them/>

AUSTRALIA: SHOPPING CENTRE DEVELOPER PARTNERS WITH WING DRONE DELIVERY CHRIS STONOR 25 OCTOBER 2022

Australian-based shopping center developer, Mirvac, has announced a partnership with Wing Drone Delivery to use its craft for urban retail centers, reports *commercialrealestate.com*.

Australia is leading the way with ongoing Wing drone deliveries in the Queensland city of Logan and its surround between Brisbane and the Gold Coast, as well as around the country’s Capital, Canberra. Wing recently celebrated its **300,000th delivery** worldwide.



Simon Rossi

Simon Rossi, the company’s General Manager, commented, “The first place we’ll be working on together is a shopping center in Ipswich, Queensland, from the middle of next year, where we’ll have a drone ‘nest’ on the car park rooftop of Mirvac’s retail property in Orion, Springfield.”

The articles states, “Customers can go onto the Wing app, look at the store it’s servicing, pick out the item they require, and then order it. That article, up to a kilogram, is then picked, packed, and prepared and taken to the rooftop, where drones are hovering seven meters in the air, already plotting their course. The item is then put onto the packaging dangling by a tether, and the drone speeds off at 110 kilometers per hour to its destination. On arrival, the drone again hovers off the ground, lowers the tether, releases the package and then departs back to its nest.”



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Mirvac is looking at its shopping centers across Australia to see where each one has a suitable space, perhaps on rooftops, on the ground or even in unused parts of car parks, to establish the drone delivery hubs or “nests”. https://evtolinsights.com/2022/10/australia-major-shopping-centre-developer-partners-with-wing-drone-delivery/?mkt_tok=NzU2LUZXSioWnJEAAAGHuZTO2JUJSS9COOzhIR3X5MFQXCKzRdStqHskNTzQzEPmf0eBFAkXo6qLkfucubouvDb7K8UeAAgwgRVcKud1iieeyf-r_o1hxR672Kt_fhPO

SAUDIA Plans to Buy 100 Lilium Jets for eVTOL Operations in Saudi Arabia Jessica Reed | October 26, 2022



The airline Saudia signed a Memorandum of Understanding (MoU) with Lilium, an electric air taxi developer, to develop a network of electric vertical take-off and landing, or eVTOL, aircraft operations across Saudi Arabia. The MoU includes plans for Saudia to purchase 100 eVTOL aircraft. The announcement shared this week states that this agreement would make [Saudia](#) the first airline in the Middle East/North

Africa region to purchase Lilium’s eVTOLs.

Saudia plans to develop and operate a network of eVTOL aircraft. The airline’s operations would include “new electric point-to-point connections as well as seamless feeder connections to Saudia’s hubs for business class guests,” [according to the announcement](#).

For Lilium, this agreement could offer support throughout the regulatory approval processes in Saudi Arabia that are necessary for certifying the eVTOL. “This partnership with Saudia, our first in the Middle East, is an exciting development,” remarked Alexander Asseily, Lilium’s Vice Chairman, regarding the MoU. “We look forward to working with Saudia to deploy an eVTOL network across Saudi Arabia.” https://www.aviationtoday.com/2022/10/26/saudia-plans-buy-100-lilium-jets-evtol-operations-saudi-arabia/?oly_enc_id=7021F0632090D7B

AgEagle’s eBee drones gain FAA consent to fly over people without waiver

Ishveena Singh - Oct. 27th 2022

In a huge milestone for the US commercial drone industry, the AgEagle Aerial Systems eBee drone series has secured FAA certification for flying over people or moving vehicles without any additional waivers.



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As of today, these are **the first and only drones in the US to comply** with Category 3 of the Operations of Small Unmanned Aircraft System Over People (OOP) as established by the FAA in March 2021.

This makes the lightweight eBee aircraft extremely apt for complex, large-scale operations such as assessment of storm damage, telecom network coverage mapping, and power line and pipeline inspections.

Incidentally, the FAA already slates the eBee as the [most popular commercial fixed-wing drone](#) in the US. Over **40%** of all commercial fixed-wing drone registrations in the country since 2016 have been for the eBee, which was first released in 2013.

AgEagle's partner in the path to crucial FAA certification was **Virginia Tech Mid-Atlantic Aviation Partnership** (MAAP). The FAA-designated evaluation site tested the eBee drones extensively to provide proof of compliance with Category 3 of the rules.

According to Virginia Tech MAAP director, Tombo Jones, having an aircraft approved to operate over people will **fundamentally change** the way drone operations can be planned and conducted in the US. <https://dronedj.com/2022/10/27/ebee-drone-fly-over-people/#more-88006>

28Oct22

ONLY A PALTRY 20-30% OF DRONE FLIGHTS ARE LAANC COMPLIANT, STUDY FINDS October 27, 2022 Sally French

Drones aren't supposed to fly in controlled U.S. airspace without permission. So, when the Federal Aviation Administration rolled out an easier way to gain permission to fly in controlled airspace versus the old, clunky physical-paperwork model, compliance should theoretically be higher. But it seems that only about **a quarter** of overall drone flights in the U.S. are LAANC compliant. According to a [fresh report from LAANC service supplier Aloft](#), only an estimated 20-30% of drone flights in controlled airspace actually have LAANC authorization.

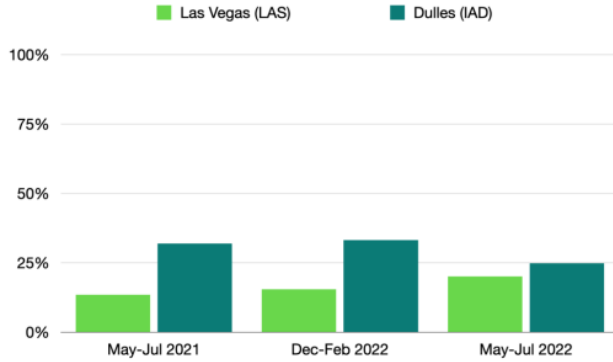
LAANC is short for '**Low Altitude Authorization and Notification Capability**.' With [LAANC](#), FAA-approved service providers like Aloft can issue near real-time approval to fly in many types of controlled airspace to most of its users.



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To estimate the compliance rate, Aloft acquired radar data for drone detection around a few sample airports to have a better understanding of how many drone flights are actually happening.

Percentage of Compliant Flights



The airports analyzed were Washington Dulles International Airport (IAD) and Las Vegas McCarran Airport (LAS). Interestingly, data was collected over three different 3-month periods to understand if trends got better or worse.

At Washington D.C.’s airport, compliance got

worse in 2022 versus the same period in 2021. Compliance got slightly better at Las Vegas, though it started from a lower rate of compliance. No matter how you slice it, **compliance is abysmally low** among all time periods and at all airports.

<https://www.thedronegirl.com/2022/10/28/drone-flights-laanc-compliant-aloft/>