



UAS and SmallSat Weekly News

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VIDEO: Australian Surfer Narrowly Escapes Shark After He Was Alerted By Drone

October 8, 2020 REESE OXNER



Professional surfer Matt Wilkinson was paddling on his board on Wednesday near Sharpes Beach in Australia. Unbeknownst to him, a shark quickly surfaced and began stalking the surfing world champion, at one point only inches away.

Drone operator Beau Monks was using a drone to surveil the waters when he saw the animal, which appears to be more than 6 feet long. He broadcast a warning to people in the water and caught the encounter on video.

"It sort of came out of nowhere, then went right up to Matt. I was tracking it and notified the lifeguards and used the speaker on the drone to get everyone out of the water," Monks said in the statement. "Within 10 seconds it was at the surfer and five seconds later it was gone."

"I got to the shore feeling a bit weird and the lifeguards showed me the footage, and I realized how close it came without knowing it was there," he said. "It looks like it's going for my leg and it's changed its mind." "I'm not entirely sure why the shark decided to turn away at the last minute. It could have been something as simple as just bumping into his leg rope, or it might have been the drone," Monks said. "Marine creatures have been known to dart away when the drone does come over."

The beach was evacuated and closed for the day afterward. The drone was supplied by the New South Wales government, which has launched a program [costing AU\\$8 million \(about \\$5.7 million\) to watch for sharks on 34 beaches using drones.](#)

<https://www.npr.org/2020/10/08/921601246/video-australian-surfer-narrowly-escapes-shark-after-he-was-alerted-by-drone>

This massive drone beamed broadband from the sky in a key test

Stephen Shankland Oct. 8, 2020



A Japanese venture called [HAPSMobile](#) lofted a giant solar-powered wing called Sunglider to an altitude of **62,500 feet** for a 20-hour data-beaming test flight in the stratosphere above New Mexico on Wednesday. Using mobile network technology from [Loon, the balloon-based internet access effort](#) from Google parent company



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Alphabet, the 262-foot-wide aircraft hosted video calls with internet pioneer Vint Cerf, among others. It also withstood strong winds.

HAPSMobile is majority-owned by Japanese technology and investment firm SoftBank, but a minority stake is from drone maker [AeroVironment](#). Also involved is the [HAPS Alliance](#) with Google, an effort to promote the high-altitude pseudo-satellite, or HAPS, technology, to secure radio spectrum globally, to fit into the airspace without causing problems and to make sure HAPS networks work well together.

The Sunlider is propelled by **10 electric motors** and is designed to **fly for months at a time**. It can carry up to 150 pounds of payload. At elevations above 60,000 feet, it's flying above conventional aircraft and most clouds.

The test took place at Spaceport America near the US Army's White Sands Missile Range in southern New Mexico. <https://www.cnet.com/news/this-massive-drone-beamed-broadband-from-the-sky-in-a-key-test/>

DroneSeed is first in U.S to receive FAA approval for post-wildfire reforestation in California October 8, 2020 News



[DroneSeed](#) announced today that the Federal Aviation Administration has approved its heavy-lift drone swarms for operation Beyond Visual Line of Sight and given the company the go-ahead to expand its use of heavy-lift drone swarms for reforestation to California, Colorado, Montana, Nevada, Arizona and New

Mexico.

The FAA's action allows DroneSeed to begin reforesting in California once a fire is contained and airspace is clear. Once sites are selected, the company will manufacture seed vessels with native Douglas Fir and Ponderosa Pine.

The approval from the FAA is a **first for the agency**, as each aircraft carries a **57-pound payload** and operates in swarms of up to five aircraft. This is the third precedent-setting FAA approval the company has earned, a significant achievement for the startup. DroneSeed is the **only company** in the United States legally approved to operate with **heavy-lift drone swarms**.

DroneSeed has developed the capability to reforest after wildfires within 60 days. This rapid response reduces forest manager weed removal costs of invasive species that grow over the



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two to three-year period while nursery trees grow. https://uasweekly.com/2020/10/08/droneseed-is-first-in-u-s-to-receive-approval-from-faa-for-post-wildfire-reforestation-in-california/?utm_source=rss&utm_medium=rss&utm_campaign=droneseed-is-first-in-u-s-to-receive-approval-from-faa-for-post-wildfire-reforestation-in-california&utm_term=2020-10-09

Reliable Robotics' drones could revolutionize the fresh fruit industry [Josh Spires](#)

Oct. 9th 2020



[Reliable Robotics](#), which is best known for converting Cessnas into autonomous drones, has partnered with fresh produce company Guimarra to help solve supply chain issues in the fresh produce industry by delivering with its **autonomous Cessna drones**.

The [test program](#) has already begun and was able to deliver tree-ripened peaches from farm to store within **24 hours** on August 7, something that is hard to do in the US. This is much faster than the **current travel time, which is around seven days** for fresh fruit to be delivered to stores. When it's seven days, the fruit must be picked earlier to make sure it can last the journey.

Tim Riley, president of Guimarra Companies, said: *To call this program groundbreaking is an understatement. We believe autonomous aircraft will **transform** the future of the fresh produce industry.*

Autonomous technology can provide the following benefits:

- Growers and suppliers can deliver fresh produce to stores in less time, resulting in less spoilage.
- Retailers can offer consumers farm stand quality produce at their local grocery store.
- Consumers can more conveniently shop for fruit and fresh produce within 24-48 hours of being picked.
- Growers can produce varieties optimized for flavor and texture versus the transportation method.

These benefits will have more of an impact for consumers and retailers in the Midwest and on the East Coast as well as those living in hard-to-reach areas. The majority of fresh produce comes from California. <https://dronedj.com/2020/10/09/reliable-robotics-drones-could-revolutionize-the-fresh-fruit-industry/#more-37696>



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DJI Responds to DOI Memo: Grounding Fleet Was “Never About National Security” Miriam McNabb October 08, 2020



The Department of Interior used their initial fleet of nearly 1,000 drones – all of which contained Chinese-manufactured parts, and many of them manufactured by DJI – to perform a wide variety of functions, such as tracking wildlife migrations and conservation projects.

The DOI decided to [down it's entire fleet](#) in January of 2020, in response to building political pressure brought to a head by a [November 2019 memo](#) from the Department of Justice, recommending that Chinese drone platforms be banned for government use.

“The new DOI guidance finally acknowledges that the grounding of its drone fleet was never about national security, but rather **thinly-veiled economic protectionism**. Five manufacturers were just handed an unfair advantage in the marketplace, as they can build their drones with Chinese parts while other companies cannot. The Blue Drone companies also charge three to five times more than a comparable DJI platform, meaning U.S. taxpayers are footing the bill for expensive military-grade drone technology from defense contractors for non-military activity such as prescribed burns, wildlife conservation and geological surveying.”

<https://dronelife.com/2020/10/08/dji-responds-to-doi-memo-grounding-fleet-was-never-about-national-security/>

VIDEO: Lucid Drone begins sanitizing sports stadiums as fans return APPLICATION HEALTH NEWS UNITED STATES VIDEO SAM LEWIS OCTOBER 9, 2020



The company, formed by Davidson College graduates, will reportedly use two disinfecting drones for the Atlanta Falcons vs Carolina Panthers game on Sunday, 11 October.

The company's drones each carry two gallons of disinfectant spray, which they then disperse after events. Traditionally large public venues would use backpack disinfectant spraying devices, but this new method **will save upwards of 90% of the time** that would take for an area like a stadium.

The International Sanitary Supply Association (ISSA) revealed that an official at the Mercedes-Benz Stadium official decreed this “the first professional sports venue to sanitize its arena using drones.” Lucid's drone disinfectant system can be viewed in action:



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<https://www.commercialdroneprofessional.com/video-lucid-drone-begins-sanitising-sports-stadiums-as-fans-return/>

Terra Drone named top global drone service provider INTERNATIONAL NEWS SAM LEWIS OCTOBER 8, 2020



This comes after the Japanese Terra Drone ranked second last year and ninth in 2018. Terra Drone provides innovative enterprise drone services for oil and gas, utilities, renewables, mining, construction and GIS sectors. In recent months it has expanded its offering to include inspection and survey services, as well as delivery and security services, to help prevent the spread of COVID-19.

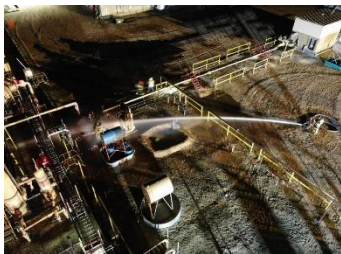
Looking ahead, the company has been developing and testing unmanned traffic management in collaboration with major corporations. Its portfolio company, Unifly, has signed with Canada's civil air navigation service provider, NAV CANADA, to deliver its UTM solution in the country.

In Europe, Terra Drone has expanded by making a large-scale investment in Skytools, a Dutch drone service company. In South East Asia, Terra Drone Malaysia opened in June 2020, and Terra Drone Indonesia has grown significantly and completed projects including pipeline monitoring and flare stack inspection for major energy companies including Chevron.

<https://www.commercialdroneprofessional.com/terra-drone-named-top-global-drone-service-provider/>

11Oct20

Fire Crews Use Drone At Oil Well Blaze To Keep Safe Distance Logan Smith October 9, 2020



WELD COUNTY, Colo. A crew from Windsor-Severance Fire Rescue gathered important imagery from its new Unmanned Aerial Vehicle to pinpoint the fire's origin and confirm it was extinguished. It was the inaugural flight for the drone and its pilot.

"There are countless opportunities for the use of UAV's," the department posted on its Facebook page, "and last night WSFR's UAV made its **inaugural flight** on an emergency scene. The UAV was used to evaluate the situation from a safe perspective while providing feedback to incident commanders regarding the effectiveness of the operational plan."



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Through a grant, local oil and gas companies paid for the drone and the cost of training and licensing its pilots.



The drone relayed a high-definition video image from above the site. It also provided thermal imaging to fire crews needing to observe the fire's heat signature before they and site operators could safely re-enter the area. <https://denver.cbslocal.com/2020/10/09/windsor-severance-fire-rescue-oil-well-site-drone->

[uav/?utm_source=Airborne+International+Response+Team+%28AIRT%29+News+List&utm_campaign=0a363a1707-EMAIL_CAMPAIGN_2020_10_11_12_50&utm_medium=email&utm_term=0_2ecada6f57-0a363a1707-33089729](https://denver.cbslocal.com/2020/10/09/windsor-severance-fire-rescue-oil-well-site-drone-uav/?utm_source=Airborne+International+Response+Team+%28AIRT%29+News+List&utm_campaign=0a363a1707-EMAIL_CAMPAIGN_2020_10_11_12_50&utm_medium=email&utm_term=0_2ecada6f57-0a363a1707-33089729)

Israeli drone company makes move to open US control center Josh Spires Oct. 8th 2020



[Israeli drone company](#) Blue White Robotics is planning to open a control center at the Technology Garden accelerator in Syracuse, New York and create 30 new jobs in operations, marketing, and sales over the next five years.

The company will get help from the city of Syracuse in the form of up to \$300,000 in tax credits and could also receive up to \$1 million as a part of the UAS Central Job Fund, which aims to create jobs within the drone industry.

Previously, the company received **\$10 million** from private American investors to help with the move into the US, which is estimated to cost around \$4 million. The company has also been working with Brooklyn-based Easy Aerial, which develops automated drone-in-a-box solutions for the security sector.

The [BWR platform](#) is an end-to-end solution that allows a single operator to control a **fleet** of drones from a remote control center. The operator can set various missions for different drones in the fleet and monitor them all in real time via a software platform that can integrate with third-party APIs to better suit the customer's needs. The platform can also integrate with other autonomous vehicles such as tractors to create a system that works together perfectly.

<https://dronedj.com/2020/10/08/israeli-drone-company-makes-move-to-open-us-control-center/>



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Drones for Police: Australian Force Equips Motorcycles with Drones Miriam

McNabb October 09, 2020



This week at [AUUSI's Xponential 2020](#) Sgt. Carl Cutler of the [Queensland, Australia Forensic Crash Unit](#), described one of the most innovative, practical and successful implementations: a fleet of motorcycles equipped with drones for an efficient [forensic analysis](#) of crash sites. The Forensic Crash Unit is the first on the scene of traffic accidents – and the unit that must thoroughly document any accident before the roads can be cleared.



“This particular product came about from 2 projects,” said Cutler. “The first was putting a fully qualified crash reconstructionist on a motorcycle so they could get to the scene quicker through traffic: get to the scene and mark, photograph and move; so that the scene could be cleared but evidence was captured. At the same time, we started developing our Remotely Piloted Aircraft program.”

The Queensland Forensic Unit program uses DJI drones and Pix4D's drone mapping platform. “When DJI released the Phantom 4 RTK in 2018, we found that our measurements on the ground were coming in bang on to the processed data from Pix4D... as the brochure says, we were getting centimeter accurate data from that product. That's when we joined those two projects together, the drone and the motorbike.”

The combination has been a stunning success, offering time **savings of 80% in processing crash sites**. <https://dronelife.com/2020/10/09/drones-for-police-australian-force-equips-motorcycles-with-drones-in-innovative-implementation/>

Small drone market worth \$92 billion in 2030 October 8, 2020 Jenny Beechener UTM and C-UAS market analysis



The small Unmanned Aerial System market continues to develop at an impressive pace and is unmarred by the challenges of COVID-19. Global tech market advisory firm, ABI Research, predicts strong growth of the industry worth \$92 billion by 2030. While the pandemic has dented consumer shipments and hindered commercial rollout, this has been



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mitigated by increased use of drones for public service responses and surveillance by both local and national police forces. Looking forward, new regulatory changes and the slow rollout of remote ID and 5G **will enable an enormous upscaling** of drone operations, from single remotely operated aircraft to semi-autonomous fleets that will be able to operate beyond visual line of sight. This will provide the base from which companies like Amazon can launch drone delivery services.

Overall, the drone market is set to be worth \$92 billion by 2030, with a CAGR rate of 25% over the \$9.5 billion in annual revenue for 2020. Of this revenue, 70% is in the commercial sector. The largest number of drone registrations are currently in the United States, where the Federal Aviation Authority tracks 1.7 million consumer drone pilots and 400,000 commercial operators. China is catching up with 400,000 registered drones, while the European Union has over 1 million registrants. Among the biggest markets are security and industrial inspection, with growing opportunities in delivery, agriculture, and emergency services.

<https://www.unmannedairspace.info/latest-news-and-information/small-drone-market-worth-usd92-billion-in-2030-abi-research/>

Workhorse bags over \$200m in financing from institutional lenders APPLICATION DELIVERY INVESTMENT SAM LEWIS OCTOBER 12, 2020



Last-mile delivery vehicle specialist Workhorse Group has entered into a note purchase agreement (NPA) to sell \$200 million aggregate principal amount of its 4% Senior Secured Convertible Notes, due 2024, to two institutional lenders.

The proceeds of the offering before expenses are expected to be approximately \$194.5 million and will be used to increase and accelerate production volume, advance new products to market, replace previous higher cost financings and support current working capital. In addition, Workhorse has entered into an exchange agreement with the holder of its existing 4.5% convertible notes to exchange the full \$70 million outstanding principal amount of those notes for shares of the company's common stock.

After the closing and release of the proceeds, the company will have over **\$270 million in cash** available. <https://www.commercialdroneprofessional.com/workhorse-bags-over-150m-in-financing-from-institutional-lenders/>



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SkyGrid Launches All-in-One Drone App to Automate Every Phase of Flight

October 7, 2020 News



Now available **for free** in the iPad App Store, SkyGrid Flight Control™ simplifies mission planning and execution, allowing drone operators to autonomously surveil a defined area and detect objects in real-time. Powered by artificial intelligence computer vision, it enables more efficient search and rescue missions, disaster response, perimeter surveillance and site inspections.

The following features and functionality are available for free within the iPad application:

- **Airspace intelligence:** Provides a map of airspace classes, boundaries, temporary flight restrictions, notices to airmen and other advisories.
- **Ground intelligence:** Displays population density, obstacles, elevation.
- **Weather data:** Local precipitation, wind speed and direction, temperature, cloud cover.
- **Real-time airspace authorization:** Automates authorization to fly in controlled airspace under 400 feet through integration with the FAA's Low Altitude Authorization and Notification Capability.
- **Automated mission planning:** Generates area exploration, waypoint and multi-objective missions based on flight parameters such as desired speed, altitude and location.
- **Autonomous flight execution:** Launches the drone and performs the flight plan.
- **AI object recognition:** Detects objects in real-time

More features are available for organizations to manage drones, pilots and airspace operations including AI-based mission planning and rerouting, multi-drone missions, custom object detection and counting, geofencing and alerts. https://uasweekly.com/2020/10/07/skygrid-launches-all-in-one-drone-app-to-automate-every-phase-of-flight/?utm_source=rss&utm_medium=rss&utm_campaign=skygrid-launches-all-in-one-drone-app-to-automate-every-phase-of-flight&utm_term=2020-10-11

Woolpert Establishes UAS Hub, Adds Office at Aviation Research Park in New Jersey

October 11, 2020 News



The space will support Woolpert's full suite of UAS and urban air mobility personnel, technology and equipment, which includes platforms, sensors and advanced data processing systems. The firm is at the forefront of researching, developing and integrating UAS



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technologies for the Federal Aviation Administration, airports and governmental agencies. Most recently, the firm was contracted to develop [UAS airfield application](#) guidelines and [UAS airport response](#) standards.

The park has collaboration agreements with Embry Riddle Aeronautical University, Rowan University, Stockton University and the **National Institute of Aerospace**. It is located in an Aviation Innovation Hub that includes the adjoining FAA William J. Hughes Technical Center and Atlantic City International Airport, which serves as a Smart Airport Research Test Bed Facility. https://uasweekly.com/2020/10/11/woolpert-establishes-uas-hub-adds-office-at-aviation-research-park-in-new-jersey/?utm_source=rss&utm_medium=rss&utm_campaign=woolpert-establishes-uas-hub-adds-office-at-aviation-research-park-in-new-jersey&utm_term=2020-10-12

13Oct20

Exolaunch signs pact with SpaceX and scouts U.S. location Debra Werner — October 9, 2020



SAN FRANCISCO – Exolaunch signed an agreement to secure rides for **dozens of small satellites** on SpaceX rideshare missions scheduled to launch later this year and in 2021.

Under the agreement announced Oct. 8, Germany’s Exolaunch plans to integrate 30 U.S. and European cubesats and microsattellites on Falcon 9 rideshare flights to sun-synchronous orbit scheduled to launch in December. Exolaunch plans to integrate roughly the same number of satellites on a SpaceX rideshare flight in mid-2021.

In response to growing demand for launch services, Exolaunch plans to open an office in the United States. “As we continue to sign on more U.S.-based customers, it makes sense strategically for Exolaunch to establish an additional office in the U.S,” Connor Jonas, Exolaunch program manager, said in a statement. Exolaunch is continuing to sign up customers for the second and third Falcon 9 rideshare missions slated for 2021. “SpaceX program is a game-changer for the rideshare launch industry giving new impetus for numerous constellations of small satellites,” said Jeanne Medvedeva, Exolaunch vice president of launch services.

<https://spacenews.com/exolaunch/>



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UAVOS Tests HAPS UAV Flight Control System 10 Oct 2020 Mike Ball



[UAVOS](#) has tested the flight control system for its ApusDuo high-altitude pseudo-satellite (HAPS) unmanned aerial vehicle, confirming that the elongated wings of the aircraft can operate under unstable atmospheric conditions by **actively** changing their bend. The test flights took place at altitudes up to **62,000 feet** and brought the total **test flight time** of the solar-powered UAV to **over a thousand hours**.

The unique control system does not require mechanization of the wings, thus significantly reducing the weight of the aircraft, improving reliability and lowering manufacturing costs by simplifying the production of the wings. The ApusDuo UAV weighs approximately 95 lbs with a wingspan of 49.2 ft and is launched by a winch. Controlled by changing the geometry of the aircraft, it is designed to linger at an altitude of around **60,000 feet for months** at a time, providing surveillance or enhancing communications infrastructure.

https://www.unmannedsystemstechnology.com/2020/10/uavos-tests-haps-uav-flight-control-system/?utm_source=UST+eBrief&utm_campaign=3c0004b5e0-eBrief%2013Oct&utm_medium=email&utm_term=0_6fc3c01e8d-3c0004b5e0-119747501

Serbia tests Chinese combat drones and Russian jets at military training ground

Reuters 11 Oct, 2020



Drone controllers demonstrate operation of drones in Datong Town of Jiande City, Zhejiang

Russian-made jet fighters, helicopter gunships and tanks fired at ground targets while Chinese combat drones flew overhead on Saturday at the desolate Pester training ground in Serbia's westernmost region in a show of revamped military power.

The training drill, dubbed Cooperation 2020 and attended by President Aleksandar Vucic and other dignitaries, underlined Serbia's close military ties with Beijing and Moscow.

For the first time, Serbia demonstrated the use of combat drones, the **first deployment** of Chinese unmanned aerial vehicles in Europe. It received six such drones in June.



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For Saturday's exercise, the Serbian military deployed more than 40 aircraft, around 150 vehicles including tanks and armored personnel carriers, and some 2,800 troops.

<https://www.scmp.com/news/china/article/3105003/serbia-tests-chinese-combat-drones-and-russian-jets-military-training>

Swoop Aero wins product innovation award for its drone Josh Spires Oct. 13th 2020



[Swoop Aero](#) has just received the Product Innovation of the Year award at the annual Australian Business Awards for its drone technology. The drone has been successful cutting down delivery times from two days to just 20 minutes.

Swoop Aero CEO Eric Peck shared: *"Our logistics infrastructure has been trusted by some of the largest players in the global health sector, including UNICEF, the Gates Foundation, Gavi, the Vaccine Alliance, USAID, and UKAID. Our company is rapidly scaling as we are on track of reaching 100 million people with sustainable drone logistics by 2025."*

They have been working with remote villages in Africa to deliver blood samples to hospitals, helping with the fight against measles, tuberculosis and HIV. Since February, the company's fleet size has doubled to keep up with the previous demand, and it will continue to grow.

Swoop Aero's drones can complete round trips of around 162 miles and can carry up to 10 test kits or up to 50 vials of blood. The drones have a wingspan of 8 feet and are required to fly below 400 feet to ensure they don't collide with manned aircraft. The flights cost \$6-\$10 which is significantly cheaper than manned transport over such a large distance.

<https://dronedj.com/2020/10/13/swoop-aero-wins-product-innovation-award-for-its-drone/>

14Oct20

Aquiline Launches Drone On-Demand Mobile App Jason Reagan October 12, 2020



[Aquiline Drones](#) is set to launch a new app to match drone operators with clients. Connecticut-based company says its Drone-on-Demand" mobile app is the **first of its kind**.

"Many individuals, businesses, law enforcement agencies, public works departments, and the military are missing out on the invaluable data collection capabilities of drones because they lack the resources for an in-house drone operation," Aquiline founding CEO Barry Alexander



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said. “Akin to Uber and Lyft, individuals and businesses can now enjoy the convenience of ordering drone services right from their fingertips.”

The app will be accessible through all mobile devices. Users may order several drone services:

- aerial photography/videography
- utility inspections (power lines, wind turbines, bridges, tunnels and railroad tracks)
- outdoor events
- real estate video
- safety patrol/search-and-rescue missions
- precision farming
- tracking wildlife

“Beyond simple viewing and camera capabilities, the drones manufactured and deployed by Aquiline Drones are managed and supported by the **world’s first drone cloud** that gathers, analyzes, models and stores data and video,” says Alexander.

<https://dronelife.com/2020/10/12/aquiline-launches-drone-on-demand-service/>

AeroVironment Secures \$8.4 Million Puma 3 AE UAS Sales Contract Award for U.S. Ally October 13, 2020 Military | News



[AeroVironment, Inc.](#) a global leader in unmanned aircraft systems, today announced it secured a \$8,371,332 firm-fixed-price U.S. Department of Defense FMS contract award on September 25, 2020 for [Puma™ 3 AE](#) tactical UAS, training and support to an allied nation. Delivery is anticipated by March 2021.

“The United States Department of Defense and the defense forces of 50 allied nations around the world rely on AeroVironment’s family of tactical unmanned aircraft systems to protect and empower frontline troops in the harshest operating environments,” said Rick Pedigo, vice president of sales and business development at AeroVironment.

The AeroVironment Puma 3 AE is a fully man-portable unmanned aircraft system designed for land and maritime operations. The hand-launched aircraft has a wingspan of 9.2 feet, weighs 15 pounds and operates for up to 2.5 hours at line-of-sight range of 20 kilometers with a standard antenna, and up to 60 kilometers with AeroVironment’s Long-Range Tracking Antenna. Capable of landing in water or on land, the all-environment Puma empowers the operator with



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extended flight time and a level of imaging capability never before available in the tactical UAS class. https://uasweekly.com/2020/10/13/aerovironment-secures-8-4-million-puma-3-ae-uas-sales-contract-award-for-u-s-ally/?utm_source=rss&utm_medium=rss&utm_campaign=aerovironment-secures-8-4-million-puma-3-ae-uas-sales-contract-award-for-u-s-ally&utm_term=2020-10-14

Applied Technology Associates Awarded Contract for CUAS Directed Energy Weapon October 13, 2020 Counter UAS



A-Tech Corporation, doing business as Applied Technology Associates, has been awarded a **\$17,663,490** project agreement. The purpose of the agreement is to obtain a ground-based Directed Energy Weapon prototype for fixed-site Air Force Air Base Air Defense against unmanned aerospace system threats. The prototype project involves the development, assembly and test of a prototype in an operationally relevant environment. Phase 1 consists of prototype design, assembly, and contractor test. Work will be performed in Albuquerque, New Mexico and is expected to be completed by September 10, 2021. The Air Force Life Cycle Management Center, Wright-Patterson Air Force Base, Ohio, is the contracting organization.

“ATA is eager to utilize our extensive heritage in Acquisition, Tracking, and Pointing applied to directed energy systems,” said Larry Lloyd, ATA’s Vice President for Business Development. https://uasweekly.com/2020/10/13/applied-technology-associates-ata-awarded-contract-for-cuas-directed-energy-weapon/?utm_source=rss&utm_medium=rss&utm_campaign=applied-technology-associates-ata-awarded-contract-for-cuas-directed-energy-weapon&utm_term=2020-10-14

15Oct20

5GAT Drone Ready for First Flight OCT. 14, 2020 DIRECTOR, OPERATIONAL TEST AND EVALUATION



The Fifth Generation Aerial Target will take its first flight later this month at Dugway Proving Ground, Utah, following nearly flawless completion of ground-based testing in September.

After a multi-month delay due to [COVID-19](#) travel restrictions, 5GAT finished a battery of ground test events at Michael Army Airfield on September 18. Executed by an integrated team of Defense Department personnel and



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contractors, the testing verified complete aircraft control, safety procedures and key performance milestones for takeoff and landing. The single prototype executed 24 taxi test events in just six days, with no interruptions or major problems.

The office of the director, operational test and evaluation sponsors the 5GAT, which is a full-scale, low-observable air vehicle that **represents**, more accurately than anything else available, the **fifth-generation fighter aircraft threats** U.S. forces could face. The low-cost drone is designed to enable air-to-air and surface-to-air platform and weapons test and evaluation, pilot and ground-force training, and the development of tactics, techniques and procedures against a fifth-generation threat. <https://www.defense.gov/Explore/News/Article/Article/2381828/5gat-drone-ready-for-first-flight/>

Australian intelligence agencies prepare for small satellite deployment Jonathan Barrett OCTOBER 14, 2020



SYDNEY (Reuters) - Australian intelligence agencies are planning to experiment with small satellite technology, which typically includes aircraft and marine vessel tracking as well as weather forecasts, as part of a tie-up with San Francisco-based space data and analytics company Spire Global.

The Djara satellite, developed for Australia's Office of National Intelligence, is scheduled to be deployed from the International Space Station early next month. "While Djara is not at operational capability, it will provide the Australian national intelligence community the ability to explore the potential applications of commercially available small satellite systems," Spire said.

The tie-up between a commercial satellite company and a government agency is **the first of its type in Australia**, and is part of a growing industry where large numbers of tiny satellites - that can weigh less than a small suitcase - provide information to their commercial and government clients from their low-Earth orbital viewpoint. <https://www.reuters.com/article/us-australia-space-spire/australian-intelligence-agencies-prepare-for-small-satellite-deployment-idUSKBN26Z31X>

SkyMul's Autonomous Drone Solution for Rebar Tying October 13, 2020 João Antunes



[SkyMul](#), a startup from the Georgia Tech Robotics Institute, wants to make one of construction's most tedious jobs a thing of the past with [SkyTy](#), an autonomous drone solution for rebar tying. By leveraging machine learning and computer vision, SkyTy allows drones



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to autonomously scan and build entire rebar maps to find and classify rebar intersections that still need tying and plan the work ahead.

“After that, we allocate the different drones to tie separate areas, while trying to avoid collisions between them,” George said. Since a job can have varying work area sizes and changes in schedule, SkyTy can work with drone swarms to enable parallel work and increase throughput, completing jobs faster. Companies can expect 84% less labor, 2.4x faster processes, and **cost savings up to 32%**. Also, by keeping workers away from the site more than they need to be and not having to constantly walk and bend over rebars, SkyMul’s solution helps to avoid injuries, therefore improving safety.

https://www.commercialuavnews.com/construction/skymul-s-autonomous-drone-solution-for-rebar-tying?utm_source=marketo&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter&mkt_tok=eyJpIjoiWVdSak5UWTBpVFZtTkRReSIsInQiOiJlEeDvJcE1Lzke3VGJtXC9SQkdGaFFCK3NXOVdVRDVuVVVMaHk0cVZV29KdGF0bmMwaktzUFE4enpBUGF5ZWtOTkZBQUY5VFIZQ2RkM3FRRHBKSGI6QQRyQ1N4eTBzU25rMIJTWTV5QVRFY1dQbll5OEfkODFLRU1DZVwvTW5iWDhoIn0%3D

Transport Canada issues second BVLOS waiver INTERNATIONAL NEWS SAM

LEWIS OCTOBER 15, 2020



The certificate was granted to MVT Geo-solutions which will be using infrastructure masking and Iris Automation’s onboard detect-and-avoid solution. MVT, the UAS Center of Excellence and Iris Automation will partner to conduct commercial missions over linear power lines in Alma, Quebec.

Approval was granted to include the utilization of Iris Automation’s DAA system, Casia, which provides commercial drones with automated collision avoidance maneuvers. These flights will leverage onboard DAA for air risk mitigation and do not require ground-based visual observers or radar.

It is the second BVLOS waiver the partnership has secured in Canada, with the first waiver being limited to flights within the Center of Excellence’s controlled airspace.

<https://www.commercialdroneprofessional.com/transport-canada-issues-second-bvlos-waiver/>

Israeli company sets sights on medical drone deliveries Scott Simmie Oct. 15th 2020



An Israeli startup hopes to one day be flying missions in Africa, delivering on-demand medical supplies to remote areas. And it has a unique drone to carry out that work. The Israeli drone is a Vertical Take-off and Landing design and has folding wings.

The company's name is [Gadfin](#). That word means "wings" in Aramaic. It takes off and lands like a multi-rotor but flies like an airplane. But Gadfin's drone is different. Its wings fold back for the takeoff and landing portions of flight and extend outwards for forward, fixed-wing flight. Here you see it in hovering mode, with the wings folded back. Four propellers deal with the vertical aspects of flight. You can see a single pusher prop at the tail for forward flight.

Israel has launched an official program called "Na-ama" that prioritizes hospital deliveries. Under that vision, most hospitals will be connected by UAS within two years. Gadfin has applied for a tender, hoping to service the corridors between four hospitals in northern Israel.

We like the look of this drone, including how its fuselage looks very much like a slippery airfoil. We'll be keeping an eye on their progress, and wish Gadfin the best.

<https://dronedj.com/2020/10/15/israeli-company-medical-drone-deliveries/#more-38238>

Air Rescue with Piloted Multicopters is Possible, Makes Sense and Improves Emergency Care October 14, 2020 News



The results of the **world's first feasibility study** on the use of piloted multicopters in rescue services has concluded that air rescue with piloted multicopters is possible, makes sense and improves the emergency medical care of the population. The 130-page study was launched at the end of 2018 by ADAC Luftrettung and sponsored by

the non-profit ADAC Foundation. In cooperation with Volocopter and the model regions Ansbach-Dinkelsbühl (Bavaria) and Idar-Oberstein (Rhineland-Palatinate), the study focused on the question: Can the rescue service system be improved and made future-proof by using multicopters as transport for emergency doctors?

After almost one and a half years of research, the tactical advantage of multicopters in rescue services can now be theoretically supported for the first time. According to the study,



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significant improvements in emergency care for an operating radius of 25 to 30 kilometers has been shown. In this case, the optimal flight speed should be between 100 and 150 km/h with a minimum range of approx. 150 kilometers. These ideal conditions would be technically possible in about four years.

With such multicopters, emergency physicians could often be at the scene of an emergency twice as fast in rural areas compared to a conventional emergency medical service vehicle and reach around two to three times as many patients in a larger health service area. Multicopters can combat the shortage of emergency doctors in many places and enable current emergency doctors to work more efficiently. The national average emergency physician arrival time has worsened in the last 20 years by almost 40 percent. https://uasweekly.com/2020/10/14/air-rescue-with-piloted-multicopters-is-possible-makes-sense-and-improves-emergency-care/?utm_source=rss&utm_medium=rss&utm_campaign=air-rescue-with-piloted-multicopters-is-possible-makes-sense-and-improves-emergency-care&utm_term=2020-10-15

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Honeywell buys specialist UAV fuel cells Greg Waldron 15 October 2020

Honeywell has acquired Ballard Unmanned System, a specialist in hydrogen fuel cells for unmanned aerial systems and other aviation applications.



Honeywell notes that fuel cells use hydrogen or another fuel to produce clean electricity. UAS using fuel cells will be able to fly longer distances and produce no greenhouse gas emissions, it says. “Ballard Unmanned Systems’ fuel cell power systems can run up to three times longer than batteries and are five times more reliable than small engines,” says

Honeywell.

Having acquired Ballard, Honeywell aims to create a family of fuel cell power systems for “a variety of UAS vehicles” and “broader aviation applications.” Honeywell’s move is consistent with its decision in June to form a dedicated business unit focusing on UAS and urban air mobility. <https://www.flightglobal.com/civil-uavs/honeywell-buys-specialist-in-fuel-cells-for-uavs/140639.article>



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Drone Experts Name SkySkopes Top U.S. Drone Service Provider Jason

Reagan October 15, 2020



One of the world's top drone-market analysts named North Dakota's [SkySkopes](#) as the #1 drone service provider in the U.S., as well as one of the best globally. [Drone Industry Insights \(Dii\)](#) ranked SkySkopes according to the company's size, consistent drone-industry development, global UAS market-share, growth, public awareness and online presence and activity.

"I'm truly delighted by Drone Industry Insights' stratification of SkySkopes as the top DSP in the U.S.," SkySkopes CEO Matt Dunlevy said. "It validates our safety-based approach and stands as a testament to the incredible professionalism demonstrated by our pilots and staff everyday. I'd have to say this ranking is also born out of the **extremely rich UAS ecosystem in North Dakota.**"

North Dakota is home to the [Northern Plains UAS Test Site](#) — one of seven Federal Aviation Administration unmanned aircraft systems test sites developing systems, rules and procedures to safely integrate unmanned aircraft into the National Airspace System without negatively impacting general or commercial aviation. <https://dronelife.com/2020/10/15/drone-experts-name-skyskopes-top-u-s-drone-service-provider/>

China Conducts Test Of Massive Suicide Drone Swarm Launched From A Box On A Truck JOSEPH TREVITHICK OCTOBER 14, 2020 THE WAR ZONE



China recently conducted a test involving **a swarm of loitering munitions**, also often [referred to as suicide drones](#), deployed from a box-like array of tubular launchers on a light tactical vehicle and from helicopters. This underscores how the drone swarm threat, broadly, is becoming [ever-more real](#) and will [present increasingly serious challenges](#) for military forces

around the world in future conflicts.

The China Academy of Electronics and Information Technology reportedly carried out the test [in September](#). CAEIT is a subsidiary of the state-owned China Electronics Technology Group Corporation which carried out a record-breaking drone swarm experiment [in June 2017](#), involving nearly 120 small fixed-wing unmanned aircraft. Four months later, CAEIT conducted [its own larger experiment](#) with **200** fixed-wing drones. Chinese companies have



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also [demonstrated impressive swarms](https://www.thedrive.com/the-war-zone/37062/china-conducts-test-of-massive-suicide-drone-swarm-launched-from-a-box-on-a-truck) using quad-copter-type drones for large public displays.
<https://www.thedrive.com/the-war-zone/37062/china-conducts-test-of-massive-suicide-drone-swarm-launched-from-a-box-on-a-truck>