



## UAS and SmallSat Weekly News

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### Utah's Teal Drones ready to ascend even higher following acquisition Art

Raymond@DNTechHive Jul 13, 2021



*Teal Drones founder George Matus poses with the company's new Golden Eagle drone near the firm's offices in Holladay on Wednesday, Sept. 2, 2020.*

Less than a year after scoring a landmark [U.S. Defense Department contract](#), Utah's [Teal Drones](#) will become the **flagship portfolio company** of Red Cat Holdings in an all-stock acquisition deal announced Tuesday.

Teal joins a quartet of independently operating innovation companies owned by [publicly traded Red Cat](#), all doing work in the fast-advancing drone and drone-related technology sector.

Founder and CEO George Matus said Teal's selection was one of five drone manufacturers approved by the Defense Department to provide remote-controlled vehicles to the armed services and other federal agencies. Red Cat, he said, brings just the right mix of talent, experience, and funding opportunities to help propel Teal to the next level.

<https://www.deseret.com/utah/2021/7/13/22573696/utah-teal-drones-acquired-by-red-cat-holdings-defense-contract-china-dji-american-security-drone-act>

### Powder Springs convict, brother sentenced for using drone in Georgia prison smuggling Matt Bruce, The Atlanta Journal-Constitution July 12, 2021



U.S. Department of Justice officials say the Georgia men's prosecution is likely **the first nationwide** for illegally piloting a drone without obtaining the required FAA airman's certification.

A federal judge sentenced George Henry Lo, 27, of Powder Springs, and his 25-year-old brother Nicholas Michael Lo to 12 months in federal prison. Both men pleaded guilty to charges and U.S. District Court Judge Dudley H. Bowen Jr. handed down the sentences June 29, according to the U.S. Attorneys Office.



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Telfair County deputies spotted a suspicious vehicle with no lights parked about 100 yards from the prison about 1:30 a.m. Aug. 26, 2019. Nicholas Lo and Toure were found hiding in a wooded area near the prison. They were carrying a large duffle bag that contained the drone, a video monitor and headset, 14 cell phones, at least 74 grams of tobacco, a digital scale and earbud headphones. Both Toure and Lo were taken into custody.

<https://www.ajc.com/neighborhoods/cobb/powder-springs-convict-brother-sentenced-for-using-drone-to-smuggle-drugs-into-georgia-prison/DROZUYRDRBLBELJZ4OFIBAMUI/>

## Verizon Takes Another Step into the Drone Industry with Robotics Business

**Technology** Miriam McNabb July 15, 2021



Verizon has taken an increasing role in the drone industry since [acquiring drone management company Skyward](#) in 2017. Since then, the company has used drones for maintaining their own network and for [emergency response](#). They've also worked to [leverage the power of 5G](#), forming partnerships with [companies like UPS](#) to work on last mile logistics and drone delivery projects.

Now, Verizon's Robotics Business Technology Division clarifies their commitment to enabling **autonomous** solutions, both in the air and on the ground. In addition to [Skyward](#), Robotics Business Technology includes [incubed IT](#), a leading developer of software for autonomous mobile robots, recently acquired by Verizon, and a team "focused on automating command and control of robots on Verizon's 5G Ultra Wideband network."

The new business unit, a part of Verizon's New Business Incubation, "will focus on creating integrated solutions that incorporate Verizon's 5G and mobile edge compute (MEC) capabilities to help enterprise customers efficiently deploy, manage and scale **mixed fleets** of aerial and ground robotics." <https://dronelife.com/2021/07/15/verizon-takes-another-step-into-the-drone-industry-with-robotics-business-technology-division/>

## These drone swarms smell trouble and could save lives

David MacQuarrie Jul. 16th 2021

The Delft University of Technology in the Netherlands calls this new type of swarm [Sniffy Bug](#). The drones are trained to search for chemical leaks in cluttered environments, using algorithms inspired by insect behavior.



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The drones move a sensor through a suspect area and search for the highest concentrations of gas. When they gather in one particular spot, the leak has likely been found. This kind of work can be dangerous and time-consuming for humans. But Sniffy Bug appears to work quite quickly.

Sniffy Bug uses the tiny [Crazyflie quadcopters](#) equipped with laser range sensors and a camera to avoid obstacles. No need for GPS since they're typically deployed inside. And of course, they also carry a sensitive gas detector.

The drones navigate using an algorithm inspired by swarming insects. They basically combine random movement with wall and obstacle avoidance. They also know how to avoid each other. They share data on gas concentrations and quickly converge on the source.

In this case, the swarm seeks out isopropyl alcohol vapor in a 10-meter-square environment. In four different configurations, the swarm rapidly found the source of the alcohol in 11 out of 12 tests. You can see them at work here: <https://dronedj.com/2021/07/16/these-drones-smell-trouble-a-drone-swarm-that-could-save-lives/>

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## JetPack Aviation completes initial Speeder VTOL trials and begins accepting pre-orders

HEADLINE NEWS INNOVATION GEORGINA FORD JULY 18, 2021



California-based JetPack Aviation has completed flight testing with the prototype – P1 – of its Speeder jet-powered VTOL mobility platform. Trials concluded successfully in May. Flight testing began in December 2020, with two-axis tethers securing the platform, progressing through a single-axis tether, and culminating in the aircraft flying with just a safety

tether connection.

The engine gimbal and articulated exhaust nozzle systems, combined with the mechanical elements of the Speeder control system, operate in conjunction with the flight controller, comprising of a computer and light sensors, to enable the aircraft's unique maneuverability.



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Within the confines of the 80ft tether system, P1 demonstrated the Speeder's ability to take-off, climb, hover, yaw, and perform slow transitions into forward flight.

With its unique combination of heavy payload, speed, VTOL operation, simplicity, and **optionally crewed flight**, the Speeder offers special missions capability, with longer-term application to the urban air mobility market. Demand is expected to be high, and JetPack Aviation has already begun readying letters of intent for customers and taking pre-orders for the aircraft. <https://www.commercialdroneprofessional.com/jetpack-aviation-completes-initial-speeder-vtol-trials-proves-capability-and-begins-accepting-pre-orders/>

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**Air Force Demos MQ-9 Takeoff, Landing System Readiness** Angeline Leishman July 16, 2021 C4ISR, News



*Air Force MQ-9 Reaper*

The U.S. Air Force's 556th Test and Evaluation Squadron has proven the readiness of an **automatic takeoff and landing system** for the MQ-9 Reaper remotely piloted aircraft during a two-day flight test from Creech AF Base in Nevada to two separate destinations.

USAF said Thursday the unmanned aircraft used cockpit-fitted imagery technology and a targeting pod to survey runways for uncontrolled liftoff and touchdown **without the help of any traditional launch and recovery crew on site**.

The drone took off and landed by itself during trips to Cannon and Holloman bases in New Mexico, with flight control by airmen at Nellis AFB in Nevada. Under traditional procedures, airmen must first electronically identify reference points when the Reaper is in position on the runway before or after a flight. However, with ATLC making human assistance during deployment unnecessary, the military service expects the MQ-9 to be sent to a foreign location for the first time even in the absence of any specialized infrastructure as part of its Agile Combat Employment Strategy. <https://www.executivegov.com/2021/07/air-force-demonstrates-mq-9-reapers-automatic-takeoff-landing-capability/>



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### Drone Tech Innovation Will Flow Emergency Footage Directly to 911 Call

**Centers** Jason Reagan July 15, 2021



Public-safety tech firm [Carbyne](#) this week announced a partnership with [Edgybees](#), a provider of geo-registration software for aerial video. The new integration will help improve response time and accuracy during [emergencies](#) by flowing real-time drone video footage directly from the scene to 911 dispatchers and command centers.

Edgybees' AI-centric software will expand on Carbyne's video-imagery data set and provide geographical registration from any drone, which can then be transmitted into any application gateway connector.

"Carbyne can receive footage from any connected drone and stream it directly to the 911 call center, not only giving dispatchers and first responders an aerial view of the territory but also providing additional data points such as specific street names or traffic lights to pinpoint the exact location of the disaster," a Carbyne media statement noted. "This unique approach generates real-time, detailed overlays of roads, key landmarks and other mission-critical data on top of live video feeds, enabling defense, public safety and critical infrastructure teams to accomplish lifesaving and high-urgency missions quickly and safely."

<https://dronelife.com/2021/07/15/drone-tech-innovation-will-flow-emergency-footage-directly-to-911-call-centers/>

**Killer robots need ethical rules, US and Chinese analysts agree** KEN MORIYASU and ALEX FANG, Nikkei staff writers May 27, 2021



*Sailors move an X-47B unmanned combat air system demonstrator onto an aircraft elevator aboard the USS George H.W. Bush aircraft carrier in the Atlantic Ocean*

NEW YORK -- Autonomous weapons systems, or "killer robots," have no fear, no anger, and no guilt or hesitation about pulling the trigger. They do as their programming tells them to.

From U.S. operations in Afghanistan to the recent Israel-Hamas conflict, unmanned vehicles have been in heavy use. But the impact of drones in the autumn 2020 clash between Azerbaijan



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and Armenia in the Nagorno-Karabakh region caught the eye of many military experts around the world.

"The Azerbaijanis used drones to incredible new effect," Peter Singer, a strategist at the New America think tank and author of "Burn-In: A Novel of the Real Robotic Revolution," told Nikkei Asia. "They took out over 40% of Armenia's tanks and armored fighting vehicles, and over 90% of their artillery and missiles, utilizing a mix of airstrikes and drones."

The Washington-based think tank Brookings Institution and the Beijing-based Tsinghua University, together with the Berggruen Institute in Los Angeles and the Minderoo Foundation in Perth, Australia, have been conducting dialogues on the issue over the past two years.

In [a joint report](#), Tsinghua's Fu Ying, a former Chinese vice minister of foreign affairs, wrote that AI has limitations, including the inability to interpret intuition, emotion, responsibility and value. In the human-machine collaborative process, the machine's deficiencies could lead to escalations of international crises, she said. "China is ready to work with the U.S. and the rest of the world on the governance of AI." <https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/Killer-robots-need-ethical-rules-US-and-Chinese-analysts-agree>

**Asio Technologies launches “jam-proof optical drone navigation system”** July 16, 2021 Philip Butterworth-Hayes UAS traffic management news



Israel's Asio Technologies, an experienced contractor in navigation systems and related technologies for the defence sector, has launched NavGuard, a self-contained, real-time optical navigation system that allows for GNSS-free navigation based on an on-board geo infrastructure.

According to the company: “This camera-based visual situation awareness can be used from take-off to landing. NavGuard turns off-the-shelf camera into a sensor that almost any drone can use to navigate as a replacement to GPS/GNSS. In a recent field test, Blue White Robotics successfully completed sUAS flight trials while under GPS satellite interference and jamming using Asio's NavGuard. This test was sponsored by the Israeli Ministry of Transportation, Israel Innovation Authority and Civil Aviation Authority.

“The user-friendly, self-contained qualities of NavGuard's architecture are an easy fit as this application moves into civilian arenas. For commercial delivery services, consumer, or local-government applications, NavGuard's benefits are designed to allow it to **operate almost**



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anywhere. <https://www.unmannedairspace.info/latest-news-and-information/asio-technologies-launches-jam-proof-optical-drone-navigation-system/>

### FAA seeks UAS operator to analyze radio frequency interference July 19, 2021 Philip Butterworth-Hayes UAS traffic management tenders



The FAA is looking for a contractor who can demonstrate RFI locating services for a wide number of frequencies. Demonstration shall be Visual Line of Sight operations below 400' AGL. Contractor will: Provide the source interference for all frequencies. For GPS L1, L2, and L5, the contractor may conduct demonstration on an adjacent L-Band frequency. Contractor is responsible for frequency authorizations to broadcast source interference for these demonstrations.

Contact FAA Flight Program Operations Service Center prior to each UAS operation to brief the planned operation. Discern if source interference is not present or provide bearing to the source interference. Demonstrate capability to locate interference sources at power levels capable of interfering with the communication and navigation services listed. Triangulation from multiple UAS operating locations is an acceptable method of RFI location. Demonstrate capability to loiter for at least 30 minutes and be airborne at least 6 hours within a 12 hour period. Tethering is acceptable. Collect additional source data helpful for identifying the source (e.g. modulation type, bandwidth, demodulated voice or data).

Provide a demonstration report to include lessons learned and CONOPS for commercial UAS services to provide RFI locating. Tender number: 6973GH21R00167 Deadline: 30 July 2021 <https://www.unmannedairspace.info/latest-news-and-information/faa-seeks-uas-operator-to-analyse-radio-frequency-interference/>

### U.S. Air Force Contracts Citadel Defense to Defeat Drone Swarms as Threat Escalates July 18, 2021 Counter UAS



Citadel Defense has secured \$4M in new government contracts in June as demand for combat-proven counter drone solutions accelerates. Rapid proliferation of small, low-cost drones threatens personnel and critical assets, impacting the military's ability to conduct operations. Unmanned systems have been used by terrorists to collect intelligence,





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bypass ground-based physical barriers, and carry out highly effective attacks.

The undisclosed government customer has selected Citadel's Titan as the preferred radio frequency sensor for both standalone and highly integrated layered defense solutions. The Titan systems will be utilized for pre-deployment training, mobile security, and fixed site protection.

Titan uses an automated decision engine to match threats with optimized electronic countermeasures without requiring an operator's manual response, interpretation of the threat scenario, or expertise in discriminating complex signal characteristics.

[https://uasweekly.com/2021/07/18/citadel-defense-secures-4m-contract-for-ai-counter-drone-solution/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=citadel-defense-secures-4m-contract-for-ai-counter-drone-solution&utm\\_term=2021-07-19](https://uasweekly.com/2021/07/18/citadel-defense-secures-4m-contract-for-ai-counter-drone-solution/?utm_source=rss&utm_medium=rss&utm_campaign=citadel-defense-secures-4m-contract-for-ai-counter-drone-solution&utm_term=2021-07-19)

## OneSky Selected by NASA to Participate in Advanced Air Mobility National Campaign July 18, 2021 News



NASA's Advanced Air Mobility National Campaign will bring together thought leaders from around the world to gather research which will enable a safe, secure, and effective advanced air mobility system in the U.S.

The National Campaign includes advanced air mobility (AAM) vehicle providers; infrastructure companies who will provide services, hardware, and software; and airspace services companies like OneSky who can perform airspace simulations, operations and traffic management services that will allow stakeholders to evaluate a wide variety of advanced air transportation applications. These detailed tests will help regulators and technology providers establish a framework for AAM traffic management systems.

As part of NASA's National Campaign program, OneSky is working with U.S.-based autonomous air vehicle developer Wisk Aero, as well as several global companies external to the National Campaign including the Urban Air Mobility Division of Hyundai Motor Group and infrastructure company Skyports.

Through the National Campaign partnership, OneSky will be able to incorporate the performance and operational capabilities of the Wisk vehicle, as well as those from additional vehicle partner Hyundai, while incorporating data and dynamic interactions with Skyports' landing infrastructure. Using their simulation environment, OneSky will be able to simulate



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vehicle operations in the context of air-based transportation systems.

[https://uasweekly.com/2021/07/18/onesky-selected-by-nasa-to-participate-in-advanced-air-mobility-national-campaign/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=onesky-selected-by-nasa-to-participate-in-advanced-air-mobility-national-campaign&utm\\_term=2021-07-19](https://uasweekly.com/2021/07/18/onesky-selected-by-nasa-to-participate-in-advanced-air-mobility-national-campaign/?utm_source=rss&utm_medium=rss&utm_campaign=onesky-selected-by-nasa-to-participate-in-advanced-air-mobility-national-campaign&utm_term=2021-07-19)

### **PrecisionHawk launches upskill training for drone pilots conducting electric grid inspections** Ishveena Singh Jul. 19th 2021



Drone company PrecisionHawk is joining forces with the National Rural Electric Cooperative Association to upskill the latter's Part 107 drone pilot members. PrecisionHawk wants to teach NRECA drone operators how to inspect electricity transmission and distribution assets more safely and efficiently across the United States.

Electric cooperatives in the US power 56% of the nation's landmass while owning and maintaining 2.7 million miles of electric distribution lines across 48 states. Roughly 300 electric co-ops currently use drones as part of their operations processes.

The 10-hour upskill program is designed to provide hands-on training, and it will be conducted in the field. Part 107 drone pilots can expect to learn the dos and don'ts of flying safely in hazardous environments and emergency situations.

PrecisionHawk says that the course will ultimately test pilots on skill competencies specific to drone-led energy inspections and teach them how to efficiently run a single-pilot operation. Upon course completion, the participants will receive a certificate of accomplishment.

<https://dronedj.com/2021/07/19/precisionhawk-upskill-training-electric-grid-inspections/>

**20Jul21**

### **Blue sUAS "Less Capable, More Expensive" and Include Chinese Drone Parts**

Miriam McNabb July 19, 2021



The Blue sUAS list of 5 drone solutions was published by the U.S. Department of Defense in response to security concerns over China-made drone technology.

Originally designed to identify small drones that could be purchased with DoD funding, the list has since been adopted by



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other government agencies and some commercial industries as a “safe” list. A Department of Interior memo published in January says that **the solutions do not meet their needs**.

The U.S. Department of the Interior (DOI) was possibly the federal agency most affected by the ban on Chinese-made drone technology. In 2018, the DOI downed their entire drone fleet of more than **800 aircraft** in response to security concerns, even though they had worked with drone manufacturer DJI on a “Government Edition” which a later Pentagon audit confirmed **did not pose a security risk**.

The memo, written in January for the incoming Biden administration, said: “It reduces DOI sensor capabilities by 95 per cent . . . The aircraft are designed for a specific Department of Defense mission set and **will only meet around 20 per cent of DOI mission requirements**.”

Additionally, the memo pointed out that Blue sUAS solutions may **cost between 8 and 14 times more** than the COTS drones that the DOI used previously. Most of the Blue sUAS contain Chinese-made parts, including circuit boards. The “country of origin” approach that lawmakers have used to define drone security could prove **a double-edged sword** for government agencies – particularly as the FTC moves to crack down on **exactly what “Made in the U.S.” means**.  
<https://dronelife.com/2021/07/19/blue-suas-less-capable-more-expensive-and-include-chinese-drone-parts-says-doi-memo/>

### **DHL aims to deploy longer distance drones to beat stretched supply**

**lines** Jonathan Saul JULY 19, 2021



LONDON (Reuters) - Logistics giant DHL is working with Bulgarian aircraft developer Dronamics on rolling out cross-border and inter-city drones aimed at

overcoming strained supply chains.

DHL said it was already using smaller drones to carry documents, parcels and pharmaceuticals over limited distances in Germany, Tanzania and China. It partnered with UK and Bulgaria based operator and developer Dronamics with the aim of using the unmanned planes they have designed, which can carry **350 kg of cargo up to 2,500 km**.

The first production-scale drone will be ready in October, Dronamics chief executive Svilen Rangelov said, adding it expected to be the **first deployed** commercially that would go **beyond 100 km**.



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Rangelov said Dronamics, which only flies airport to airport for now, had signed agreements with **39 airports in 13 countries** in Europe and was in discussions with airports, regulators and potential customers in Australia and Canada.

German logistics company DB Schenker is working with separate developer Volocopter on a cargo drone that can transport **200 kg up to 40 km**, it said earlier this month.

<https://www.reuters.com/article/freight-drones-dhl/dhl-aims-to-deploy-longer-distance-drones-to-beat-stretched-supply-lines-idUSL8N2OR2NH>

### Heavy-Lift Cargo Drone Completes Flight Tests 16 Jul 2021 Sarah Simpson



UAVOS has completed a series of flight demonstrations of its converted UVH-500 unmanned helicopter. During the demonstrations, the UVH-500 Unmanned Aerial Vehicle was able to drop cargo of 220 lbs. at specified locations and demonstrated its ability to operate day and night, and in adverse weather conditions.

Based on the piloted CH-7 helicopter, UVH-500's 353-pound cargo capacity is designed for quick and sustainable transport and time-sensitive deliveries. It has a 522-mile range and cruising speed of up to 99 miles per hour

Boasting advantages of beyond visual range, long endurance, heavy load, strong wind resistance and high efficiency flight control, it could provide a solution for intercity air freight delivery. The cargo drone features a collision avoidance transponder, providing enhanced airspace visibility and minimizing the risk of collision with other aircraft.

[https://www.unmannedsystemstechnology.com/2021/07/flight-demonstration-of-uvh-500-heavy-lift-cargo-drone/?utm\\_source=UST+eBrief&utm\\_campaign=1c28b0e859-ust-ebrief\\_2021-jul-20\\_engaged&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-1c28b0e859-111778317](https://www.unmannedsystemstechnology.com/2021/07/flight-demonstration-of-uvh-500-heavy-lift-cargo-drone/?utm_source=UST+eBrief&utm_campaign=1c28b0e859-ust-ebrief_2021-jul-20_engaged&utm_medium=email&utm_term=0_6fc3c01e8d-1c28b0e859-111778317)

### Teal Drones Acquired by Red Cat Holdings Miriam McNabb July 19, 2021



Blue sUAS provider [Teal Drones](#) acquired by [Red Cat Holdings](#) (NASDAQ: RCAT) in an all-stock deal.

Puerto Rico-based Red Cat includes remote inspection company Skypersonic, analytics



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platform Dronebox, drone imaging and communications company Fat Shark, and consumer drone company Rotor Riot.

The Teal Drones acquisition will provide Red Cat with a government sector solution. Teal was founded by [then-teenaged George Matus in 2015](#) with revolutionary consumer drones. Since then, Teal's Golden Eagle, developed in collaboration with the DoD's Defense Innovation Unit, [made the "Blue sUAS" list](#) – a list of only 5 drone solutions identified by the DoD as appropriate for purchase with DoD funding.

*Teal's open and modular platform allows applications to be developed and integrated for next-generation capabilities. Partners actively integrating technologies with Teal include Autonodyne, Tomahawk Robotics, Dronelink and Skyward.* Since the Teal Drones acquisition was announced, Red Cat has raised **\$60 million** in a [secondary public offering](#). <https://dronelife.com/2021/07/19/teal-drones-acquired-by-red-cat-holdings/>

### **Verizon launches Robotics Business Technology** July 20, 2021 News



Verizon announced the formation of Robotics Business Technology to expand enterprise solutions for aerial and ground robotics. Robotics Business Technology includes [Skyward](#), Verizon's drone management company, incubated IT, a leading developer of software for autonomous mobile robots [recently acquired](#) by Verizon, and a team focused on automating command and control of robots on Verizon's 5G Ultra Wideband network.

As a part of [New Business Incubation](#) at Verizon, this new business unit will focus on creating integrated solutions that incorporate Verizon's 5G and mobile edge compute capabilities to help enterprise customers efficiently deploy, **manage and scale mixed fleets** of aerial and ground robotics. Mariah Scott, Head of Robotics Business Technology said, "By integrating these fleets with one operational platform, and leveraging Verizon's connectivity solutions, businesses can speed up time to insight, increase automation of their operations and deliver greater value."

Robotics Business Technology will provide connected robotics solutions to existing and future customers for indoor and outdoor use cases in manufacturing and logistics, commercial construction, oil and gas, energy and utilities, the public sector, and media.

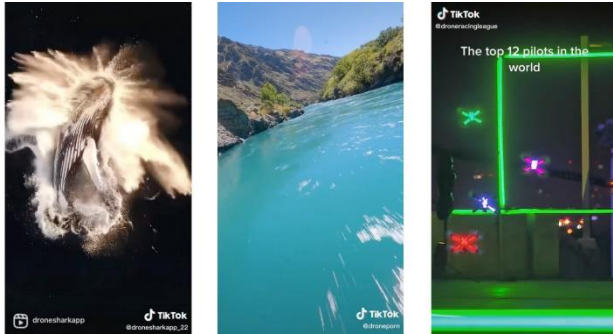
<https://uasweekly.com/2021/07/20/verizon-launches-robotics-business->



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[technology/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=verizon-launches-robotics-business-technology&utm\\_term=2021-07-20](https://www.axcelinnovation.net/technology/?utm_source=rss&utm_medium=rss&utm_campaign=verizon-launches-robotics-business-technology&utm_term=2021-07-20)

### On TikTok? Follow these amazing drone accounts [video] Scott Simmie Jul. 20th 2021



When we did a simple search for “drone,” TikTok pumped a few of the highest-profile accounts our way which has 1.8 million followers. After checking out a few posts, it’s easy to see why. The FPV piloting is first-rate.

Check out “Natural Gatorade,” which features some very impressive dives

through trees until the pilot is effortlessly gliding over the surface of water the color of Gatorade.

This next video is kind of a primer on what FPV racing is all about. Most of you will already be familiar with what’s discussed, but it’s a cool overview for the first-timer.

The account [dronesarkapp\\_22](https://www.tiktok.com/@dronesarkapp) appears to be based in Australia, and features some *amazing* videos taken at various locations just off the Australian coast. This one, for example, features what appear to be dolphins feeding on smaller fish. And while we’re here, one more from the same account. This one shows whales breaching:

As we mentioned at the outset, there are a ton of excellent drone pilots out there – whether they’re flying FPV or more standard drones. We’re going to keep an eye out on TikTok in the future and pop some of these up on a regular basis. <https://dronedj.com/2021/07/20/tiktok-drone-video-accounts-worth-following/>

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### The DOI Memo on Blue sUAS: American Drone Alliance Responds Miriam

McNabb July 20, 2021

The American Drone Alliance, a group comprised of U.S.-based drone manufacturers and Blue sUAS providers [Skydio](https://www.skydio.com/) and [Teal](https://www.tealrobotics.com/) with European-based open software platform [Auterion](https://www.auterion.com/), have published a response to the Financial Times article [releasing a DOI memo](https://www.ft.com/content/2021-07-19/blue-suas-critical-response) critical of [Blue sUAS solutions](https://www.ft.com/content/2021-07-19/blue-suas-critical-response).



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The DOI memo complained that Blue sUAS solutions did not meet their department’s needs, claiming that they were “less capable and more expensive” than the commercial drones previously used, and still contained Chinese parts, including circuit boards. The American Drone Alliance responded to the article, saying that the piece “mischaracterizes the current domestic drone marketplace,” and downplays the national security threat posed by China-made drone technology. The Financial Times article can be [found here](#) (behind paywall.) The unedited American Drone Alliance statement is published below.

“Yesterday’s *Financial Times* piece on Chinese drones mischaracterizes the current domestic drone marketplace and fails to acknowledge the widely-recognized national security threats posed by Chinese drones.

While you cannot put a price tag on national security, the reality is that the American-made drones selected by the Department of Defense are in fact cost competitive with Chinese alternatives. More importantly, they have been subjected to demanding cybersecurity reviews and deemed safe for use by government agencies. They are rugged and ready, capable of operating in the most demanding environments...” <https://dronelife.com/2021/07/20/the-doi-memo-on-blue-suas-american-drone-alliance-responds/>

## Citadel Scores Another Counter Drone Contract to Protect Military Jason Reagan July 16, 2021



Counter-drone company [Citadel Defense](#) has captured **\$4 million** in government contracts from an undisclosed, American government agency to keep rogue drones – some piloted by terrorists – away from military operations.

Over the last few years, insurgent groups have begun using drones in combat environments to harm personnel and equipment in the field. Citadel deploys counter-drone systems to a global client base, offering protection from rogue drone missions such as drone attacks in [Armenia](#) and the Middle East.

The agency bought Citadel’s Titan system for pre-deployment training, mobile security, and fixed site protection. The system uses AI, machine learning and electronic countermeasures to prevent a nefarious drone from penetrating protected airspace.



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The Titan system also generates a post mission analysis report that highlights threat activity patterns to equip ground command with mission-critical insights.

“Citadel’s advanced algorithms, artificial intelligence, and autonomous capabilities serve as a force multiplier when protecting against unmanned system threats in resource-constrained environments,” explained Christopher Williams, CEO of Citadel Defense.

Citadel has already released an [AI-powered software](#) suite company officials say will autonomously protect against threats from 98 percent of commercial off-the-shelf drones. <https://dronelife.com/2021/07/16/citadel-scores-another-counter-drone-contract-to-protect-military/>

## University of Kentucky Hosts 1st Event at Agricultural and Atmospheric Research Facility

DRONES AT WORK HEADLINE NEWS GEORGINA FORD JULY 21, 2021



Researchers from the University of Kentucky Department of Mechanical Engineering hosted collaborators from Virginia Tech and Oklahoma State University for a series of unmanned aircraft systems flight experiments June 21-24 at the new Wildcat Agricultural and Atmospheric Research Pavilion flight facility, a 971-hectare research facility operated by the University of Kentucky.

This flight experiment campaign is part of the [NASA-sponsored Weather Intelligent Navigation Data and Models for Aviation Planning \(WINDMAP\)](#) multi-university research collaboration to **improve weather awareness** for future advanced aerial mobility systems such as drones, air taxis and urban flight management.

“WAARP is a state-of-the-art facility that co-locates UAS and meteorological infrastructure on a UK research farm currently serving the departments of veterinary science, animal and food science, plant and soil sciences, horticulture, and biosystems and agricultural engineering. WAARP features 450 feet by 45 feet geotextile runway to support UAS operations. UK’s current fleet consists of various sizes and models of autonomous fixed-wing, multi-rotor, and vertical-takeoff-and-landing aircraft. A sizeable open shelter provides ample comfortable workspace, power, storage, and visibility for pre-and post-flight efforts, ground station computers, mission control operators, and pilots-in-command, enabling efficient and effective research flight operations. <https://www.commercialdroneprofessional.com/university-of-kentucky-hosts-1st-event-at-new-wildcat-agricultural-and-atmospheric-research-pavilion-flight-facility/>





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### Germany's first drone traffic system starts in Hamburg DRONES AT WORK HEADLINE

NEWS GEORGINA FORD JULY 20, 2021



In the future, drones will have their own traffic system. This system will allow flights in areas with a high volume of drones to be carried out easily, safely, efficiently, and **in coordination with manned air traffic.**

This is the idea behind U-Space – a concept of EASA, the European Union Aviation Safety Agency. EU member states must implement U-Space by the beginning of 2023. Droniq GmbH, a leading German company for integrating drones into airspace, and its parent company DFS, the German air navigation service provider, are putting the idea into practice for the first time – from conception to commissioning.

The companies are setting up a U-Space Sandbox in the Port of Hamburg. The project has a volume of approximately **one million euros** and is being funded partly by the German Federal Ministry of Transport and Digital Infrastructure.

Drones are increasingly being used commercially, from inspecting construction sites to surveying possible routes for pipelines and roads. Drone flights will need to be easy to conduct and feasible at short notice. However, the reality is different, and drone flights are not always feasible, especially in areas with a high volume of drones. This is due to lengthy flight approval processes.

U-Space is intended to solve these challenges. In U-Space, special rules and procedures coordinate drone traffic. Flights can be carried out quickly, safely, and without a lengthy approval process – even beyond the pilot's line of sight.

“In the future, U-Space will also allow the full potential of drones to be exploited in urban areas within an established framework,” says Droniq CEO Jan-Eric Putze. “For unmanned aerial transport, this is a **milestone**. We are proud to show for the first time what this future can look like.” <https://www.commercialdroneprofessional.com/germanys-first-drone-traffic-system-starts-in-hamburg/>



## UAS and SmallSat Weekly News

### VALAQ Patrol VTOL UAV 20 Jul 2021 Mike Ball



UAV Works has launched the VALAQ Patrol, a new tactical drone for **surveillance and defense** applications that is based around the company’s existing VALAQ 120 platform. The VALAQ 120 can transition from hovering mode to forward flight and vice versa, combining the advantages of VTOL helicopters with the long endurance and range of fixed-wing aircraft.

The VALAQ Patrol integrates the Colibri 2 surveillance payload from Nextvision, which features IR gyro-stabilized imaging and x40 zoom with a weight of just 180 grams. The system’s portable ground control station was upgraded to integrate tactical functions specific to its use cases. The aircraft’s capabilities and fast deployment make it ideal for police, intelligence agencies and military units. Additional features of the VALAQ Patrol include: One-hour endurance, 30 km datalink and 4G link, with STANAG standard communications to comply with NATO specifications, and one-click commands.

Tactical functions include take off and wait, follow me (convoy mode), go and point camera at a specific map location, follow a moving target, follow a hidden device, silent operation and low primary radar footprint, light weight of 4.5 kg, small enough to be carried in the rear seat of a car, deployment time under 2 minutes.

<https://www.unmannedsystemstechnology.com/2021/07/new-hybrid-vtol-uav-for-surveillance-defense-launched/>

### Aloft Patents UTM Platform Technology to Accelerate Safe and Compliant Operations July 21, 2021 News



Aloft (formerly Kittyhawk), the leader in drone operations and airspace management solutions, has been awarded another patent for their industry leading Dynamic Airspace platform. This latest patent adds to their existing portfolio of IP for the technology powering the next generation of Universal Traffic Management Systems and their existing “XiD” technology patents for Remote Identification of drones and additional parts of Dynamic Airspace.

Aloft’s Dynamic Airspace platform powers the entire Aloft UTM platform as well as the FAA’s B4UFLY application. Since Aloft’s revamp of the B4UFLY platform on web, iOS and Android, the



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Dynamic Airspace platform powering it has served well over 10 million airspace checks, making it **the highest volume airspace solution in the market**.

“We’re proud to see our solution being deployed against such a wide range of use-cases. Our philosophy has always been to ship solutions customers use rather than create demonstrations or exhibitions. The IP we’ve created from Remote ID to Dynamic Airspace to UTM forms the building blocks of an ecosystem where drone operations can scale without compromising safety or compliance,” says Aloft CTO Joshua Ziering. [https://uasweekly.com/2021/07/21/aloft-patents-utm-platform-technology-to-accelerate-safe-and-compliant-adoption-of-drone-operations-and-delivery/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=aloft-patents-utm-platform-technology-to-accelerate-safe-and-compliant-adoption-of-drone-operations-and-delivery&utm\\_term=2021-07-21](https://uasweekly.com/2021/07/21/aloft-patents-utm-platform-technology-to-accelerate-safe-and-compliant-adoption-of-drone-operations-and-delivery/?utm_source=rss&utm_medium=rss&utm_campaign=aloft-patents-utm-platform-technology-to-accelerate-safe-and-compliant-adoption-of-drone-operations-and-delivery&utm_term=2021-07-21)

### **MSA Safety Announces Agreement with Swiss Autonomous Drone Technology Firm** July 20, 2021 News



MSA Safety Incorporated, developing products that protect people and facility infrastructure, announced it has established a Joint Development Agreement with Perspective Robotics AG of Zurich, Switzerland. Established in 2014, Perspective develops situational awareness tools that utilize **tethered drone technology for first responder** applications under the brand name Fotokite.

The two companies will collaborate to advance fire scene situational awareness, both locally and through the cloud, through the development of products and services that leverage Fotokite’s expertise in autonomous and tethered drone technology and situational intelligence and MSA’s experience in developing products, systems and technologies for firefighter safety and accountability. [https://uasweekly.com/2021/07/20/msa-safety-announces-investment-and-collaboration-agreement-with-swiss-autonomous-drone-technology-firm-to-enhance-fire-service-offerings/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=msa-safety-announces-investment-and-collaboration-agreement-with-swiss-autonomous-drone-technology-firm-to-enhance-fire-service-offerings&utm\\_term=2021-07-21](https://uasweekly.com/2021/07/20/msa-safety-announces-investment-and-collaboration-agreement-with-swiss-autonomous-drone-technology-firm-to-enhance-fire-service-offerings/?utm_source=rss&utm_medium=rss&utm_campaign=msa-safety-announces-investment-and-collaboration-agreement-with-swiss-autonomous-drone-technology-firm-to-enhance-fire-service-offerings&utm_term=2021-07-21)



## UAS and SmallSat Weekly News

### **New DJI video highlights impressive drone solar inspection** Scott Simmie Jul. 21st 2021



DJI released a new video providing an overview of a drone solar installation inspection in China. It's pretty impressive.

Sustainable energy solutions like wind farms, tidal power generators, and solar installations are on the rise. Solar installations require regular inspections, as sometimes panels crack or other components

fail. Traditionally, such facilities have been manually inspected by a technician carrying a sensor. Not these days.

Drones have started to become the preferred tool for these inspections because they're capable of covering large areas and detecting even tiny imperfections. Depending on the size of the facility, such inspections can sometimes be carried out in a single flight.

And that not only saves time but also saves workers from walking or riding small vehicles, sometimes over a period of days, to capture the same data. Some solar installations are also in rugged terrain or high on rooftops, which carries inherent risk for workers.

The DJI video says that, in one instance, with a very large facility, using a drone brought about incredible efficiencies. Rather than one (we're assuming) very bored person walking for **three months**, the inspection time was reduced to **five hours** of flying time.

<https://dronedj.com/2021/07/21/new-dji-video-highlights-its-solution-for-drone-solar-inspection/#more-63380>

**22Jul21**

### **Malaysia Airports, Skyports, and Volocopter Collaborate on Vertiport** July 22, 2021



Malaysia Airports has signed a tripartite memorandum of understanding with Skyports, a designer and operator of vertiport infrastructure for electric air taxis, and Volocopter, a pioneer of urban air mobility. As a first step, the parties will conduct a feasibility study examining vertiport solutions to enable the safe take-off and landing of passenger



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eVTOL vehicles, considering factors such as demand, customer flow, and how to integrate UAM operations.

The Asia Pacific region is expected to capture around **45%** of the advanced air mobility market by 2035, translating to **\$9.5 billion**. The outcome of this venture will be a game-changer in air travel offerings. The collaboration forms part of the five-year Sultan Abdul Aziz Shah Airport, Subang Regeneration plan. It will explore the deployment of electric air taxi services at Sultan Abdul Aziz Shah Airport, Subang as well as other locations throughout Malaysia, putting the country among the leaders in the region willing to implement UAM.

<https://www.electricvehiclesresearch.com/articles/24335/malaysia-airports-skyports-and-volocopter-collaborate-on-vertiport>

### What Is an Ion Propulsion Drone and How Could it Disrupt the Delivery Market?

JULY 22, 2021 Juan Plaza



[Undefined Technologies Corp.](#), a South Florida-based tech startup, is determined to focus on designing and manufacturing a commercial UAV that would use Ion propulsion as the primary source of lift. We reached out to Tomas Pribanic, Founder and CEO of Undefined Technologies, for an interview about his company, the technology behind the idea and the drivers that moved

him and his team to go in this unorthodox direction.

Tomas formed a partnership with the University of Miami, which aided in expanding the company's venture capital network. After achieving [its successful first mission flight](#), the company closed its **Seed Funding round** to accelerate the development and commercialization of the technology.

"With [the seed round behind us](#), UT is ready to launch its Series A funding early next year to engage in the next phase. Our next ion propulsion aircraft will use materials that will allow us to build something stronger and boost thrust," he concluded. "Exciting times are ahead as we perfect our vehicle and prove that this technology will have a disruptive role to play in our markets in the years ahead." A video of the solution in action is

here: [https://www.commercialuavnews.com/drone-delivery/what-is-an-ion-propulsion-drone?utm\\_source=marketo&utm\\_medium=email&utm\\_campaign=newsletter&utm\\_content=newsletter&mkt\\_tok=NzU2LUZXSioWnJEAAAF-blN7ITaTVXcJ49BvH-d9e0VvjVGhcdkg6b8og5tq-BttWdRfFeLhZxLgFAUTqKnGLSAdwb5LhV667pFOAlkucoxcRMVPZ-RM4zwUIHsPyJMj](https://www.commercialuavnews.com/drone-delivery/what-is-an-ion-propulsion-drone?utm_source=marketo&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter&mkt_tok=NzU2LUZXSioWnJEAAAF-blN7ITaTVXcJ49BvH-d9e0VvjVGhcdkg6b8og5tq-BttWdRfFeLhZxLgFAUTqKnGLSAdwb5LhV667pFOAlkucoxcRMVPZ-RM4zwUIHsPyJMj)



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23Jul21

### European Investment Bank grants \$11.8m funding to sUAS startup Quantum Systems Bruce Crumley Jul. 22nd 2021



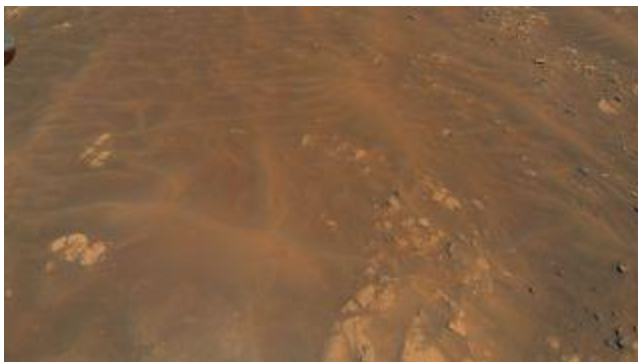
The European Investment Bank (EIB) has granted \$11.8 million to German small uncrewed aircraft systems (sUAS) company Quantum Systems to keep pace with spiking business demands. The Munich-based startup will use the funds to boost its activities for mapping and surveillance clients and pursue continued expansion according to strict environmental, social, and governance criteria.

Serving as the [European Union](#)'s bank on sectors and companies promising positive climate change, the European Investment Bank agreed to provide the funding after judging Quantum's research, development, and business plans honed to the bank's environmental, social, and governance requirements. The loan is backed by the European Fund for Strategic Investment, which itself is a central element in the Investment Plan for Europe.

The project partners the EIB and the European Commission as they seek to corral over **\$371.5 billion** in investments capable of creating jobs, increasing EU economic competitiveness, and benefitting the environment. <https://dronedj.com/2021/07/22/european-investment-bank-grants-11-8-funding-to-surgin-suas-startup-quantum-systems/>

### Mars helicopter Ingenuity gearing up for 10th Red Planet flight this weekend

Mike Wall about 2 hours ago



*NASA's Ingenuity Mars Helicopter flew over these sand dunes and rocks during its ninth flight, on July 5, 2021.*

The Martian flight tally of NASA's [Ingenuity](#) helicopter will soon hit double digits. The 4-lb. chopper's 10th Red Planet flight could happen as early as Saturday (July 24). The sortie will investigate

"Raised Ridges," a collection of rock features inside Mars' Jezero Crater from which Ingenuity's robotic partner, NASA's [Perseverance rover](#), may end up collecting some samples for future return to Earth.



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Perseverance and Ingenuity landed together on Feb. 18 on the floor of the 28-mile-wide Jezero, which hosted a lake and a river delta in the ancient past. In early April, Ingenuity deployed from Perseverance's belly, kicking off a monthlong technology-demonstrating flight campaign.

The rotorcraft aced all five of the sorties it conducted during that stretch. NASA then granted Ingenuity a mission extension, during which the helicopter is showcasing the scouting potential of Mars aerial vehicles. <https://www.space.com/mars-helicopter-ingenuity-10th-flight-preview>