



## UAS and SmallSat Weekly News

### Contents

- 2 Israel Aerospace, UAE weapons maker team up on anti-drone tech
- 2 Axon and Skydio Partner to Bring AI-Powered Autonomous Drones to Public Safety
- 3 Quieter skies during pandemic accelerate drone tech development
- 3 Death from the skies? The threat of drug smuggling by drone
- 4 eVTOL air taxi projected to grow to \$14.7 billion by 2041
- 5 Estonian Railways use drones to digitize railway assets
- 6 UAE and Israel collaborate on counter UAS solution
- 6 When Will Remote ID Go into Effect? FAA Announces Date
- 7 The Rolls-Royce of Passenger Drones
- 7 SpaceX sets new booster reuse mark with Starlink launch
- 8 How mini drones are being deployed to kill insects
- 8 Low-Cost Drones Learn Precise Control Over Suspended Loads
- 9 Grand Opening of New East Coast UAS Facility at SBY
- 10 Embry-Riddle Researchers Receive FAA Grants to Assure Drone Safety
- 10 Search and rescue drones tested at an offshore wind farm
- 11 UTM in Singapore: OneSky Works on UTM Services for a Unique Urban Environment
- 12 Censys Develops VTOL UAVs & Command Vehicles for BVLOS Operations
- 12 Texas Department of Public Safety Awards DroneSense SaaS Contract
- 13 DroneUp® Acquires Web Teks
- 14 Martin UAV Unveils the V-BAT 128, Newly Upgraded V-BAT Model
- 14 Swiss company looks to use drones to capture weather data
- 15 Volocopter raises \$240m in mission to develop air taxis for cities around the world
- 15 ONE WAY TO DETECT (AND PREVENT) DRONE CRASHES BEFORE THEY HAPPEN
- 16 Transforming Building Inspection in NYC
- 17 Windhover Labs Introduces US-Made Drone Flight Computer
- 17 TideWise, STABLE complete autonomous oil spill detection trial
- 18 Dubai petrol firm uses drones to shoot tree seeds into the desert
- 19 2021 DRONE TECH: WHY LIDAR IS ONE OF THE HOTTEST TECHNOLOGIES THIS YEAR
- 19 Skyfront Drone Sets Endurance and Distance Record of 13 hours, 4 minutes
- 20 Flytrex secures \$9.3M in funding from venture and tech grant
- 20 Israel's skies are filled with delivery drones in a huge trial



## UAS and SmallSat Weekly News

13Mar21

### Israel Aerospace, UAE weapons maker team up on anti-drone tech Reuters Staff

MARCH 11, 2021



JERUSALEM (Reuters) - Israel Aerospace Industries (IAI) said on Thursday it would jointly develop an advanced drone defense system with the United Arab Emirates' state-owned weapons maker EDGE. Israel and the UAE formalized relations last year, brought closer by commercial interests and concern over Iran.

State-owned IAI, a major Israeli defense firm, said in a statement that the companies will develop a Counter-Unmanned Aircraft System "tailored to the UAE market, with wider ranging benefits for the MENA region and beyond".

Yemen's Iran-aligned Houthi movement, which recently stepped up cross-border missile and drone attacks on Saudi Arabia, has in the past threatened to launch strikes on the UAE.

<https://www.reuters.com/article/us-aerospace-israel-emirates/israel-aerospace-uae-weapons-maker-team-up-on-anti-drone-tech-idUSKBN2B30YN>

### Axon and Skydio Partner to Bring AI-Powered Autonomous Drones to Public

Safety March 11, 2021 News



[Axon](#) and [Skydio](#) today announced a [strategic partnership](#) to offer Skydio's autonomous drones to law enforcement and emergency responders via Axon Air. Axon will be the exclusive reseller of Skydio's products to public safety globally. In addition, the two companies are working on seamless integration between Skydio drones and [Axon Air](#), [Axon Evidence](#), and [Axon Respond](#).

The partnership brings a paradigm shift in how public safety agencies can leverage small unmanned aerial systems for real-time situational awareness and evidence management. Drone-captured imagery will be manageable and shareable for agencies and live alongside corresponding body camera video in Axon's digital evidence management platform. Command staff and 911 dispatchers will be able to access live-streamed views from on-the-ground body cameras and drone footage, providing a more comprehensive picture of an incident.

Additionally, [Skydio 3D Scan](#), will automate scans of crime and accident scenes to create 3D reconstruction models. <https://uasweekly.com/2021/03/11/axon-and-skydio-partner-to-bring-us-manufactured-ai-powered-autonomous-drones-to-public->



## UAS and SmallSat Weekly News

[safety/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=axon-and-skydio-partner-to-bring-us-manufactured-ai-powered-autonomous-drones-to-public-safety&utm\\_term=2021-03-12](https://www.axcelinnovation.net/safety/?utm_source=rss&utm_medium=rss&utm_campaign=axon-and-skydio-partner-to-bring-us-manufactured-ai-powered-autonomous-drones-to-public-safety&utm_term=2021-03-12)

### Quieter skies during pandemic accelerate drone tech development HEADLINE

NEWS JOE PESKETT MARCH 11, 2021



Altitude Angel said it expects to become Europe's foremost supplier of UTM (Unified Traffic Management) technologies enabling nationwide drone operations globally within the next 18 months, as it releases new figures which detail the vast and extensive use of its UTM operating system and cloud platform.

In the UK, Altitude Angel's GuardianUTM platform has supported more than **20,000 drone operations in Controlled and Restricted Airspace over the past 12 months** with this number expected to rise significantly in 2021.

"General and commercial aviation traffic has been greatly reduced as a result of COVID. Quieter skies have enabled a huge acceleration in the development and demonstration of drone technologies," said Richard Parker, Altitude Angel, CEO and co-founder. "As the UK and Europe begin to emerge from the pandemic, we expect drone operations will continue and grow at an even faster pace, and Altitude Angel will continue its role as a critical player in ensuring every flight can be conducted safely." <https://www.commercialdroneprofessional.com/quieter-skies-during-pandemic-accelerate-drone-tech-development/>

### Death from the skies? The threat of drug smuggling by drone David MacQuarrie Mar.

12th 2021



The Brookings Institution worries about an international crime problem that no 30-foot wall is going to stop: It calls drug smuggling by drone a perfect storm of risk to Americans.

Michael Sinclair, a Federal Executive fellow with the [Brookings Institution](https://www.brookings.edu/), writes that more than 81,000 Americans died of drug overdoses between June 2019 and May 2020.

US Customs and Border Protection agents reported just 170 incidents over the past five years. But think of how hard it is to intercept a drone at night along that long international frontier. Some experts suggest that as many as [a thousand drones](#) could cross the border each week.



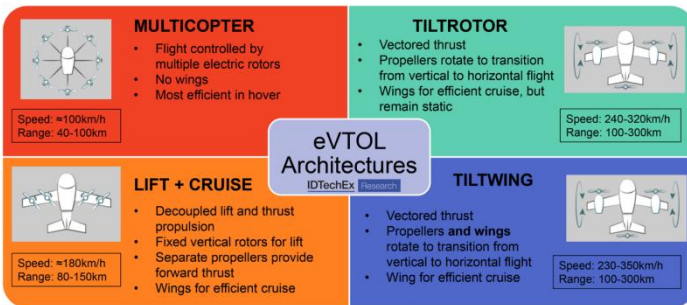
## UAS and SmallSat Weekly News

Sinclair is a little vague about what to do about it. He points out drones themselves are extremely difficult to detect. And it's difficult to determine who's flying them and from where. Also, there may be a legal issue with disabling a drone, even if it's detected. Drones are legal aircraft in the US. So jamming or interfering with a drone's electronic signals could violate several federal laws.

“Relatively small, drone-delivered, synthetic opioid cargo can mean the deaths of hundreds, perhaps thousands,” he writes. “And swarmed drone deliveries en masse could simply be devastating.”

He does have one concrete proposal: Make the border a drone no-fly zone, similar to the one over Washington, DC. <https://dronedj.com/2021/03/12/death-from-the-skies-the-threat-of-drug-smuggling-by-drone/>

### eVTOL air taxi projected to grow to \$14.7 billion by 2041 Scott Simmie Mar. 12th 2021



It was once the stuff of science-fiction: small and agile aircraft capable of vertical take-off and landing, shuttling people over urban centers. A new report suggests that not only is this aspect of urban air mobility coming... it's going to be a massive growth industry.

A new report predicts this is all part of what's going to be a very big industry. IDTechEx is a business intelligence company has turned its eye on the eVTOL air taxi market. It points out there's been a huge amount of investment in startups, and some of the major aerospace corporations have eVTOL projects underway.

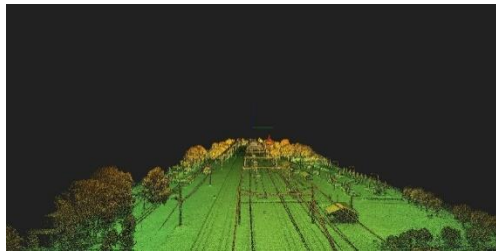
*In January 2020, Toyota invested nearly \$400 million in eVTOL start-up Joby Aviation in a \$590 million funding round joined by private fund manager Baillie Gifford, which famously invested early in Tesla stock at \$6 per share. Baillie Gifford have also invested \$35 million in German eVTOL OEM Lilium. Aside from Joby Aviation and Lilium, there are a host of interesting eVTOL start-ups that have popped up around the world, including Volocopter, EHang, SkyDrive, Vertical Aerospace, Jaunt Air Mobility, Archer Aviation, and Beta Technologies. As the first eVTOL aircraft get closer to flight certification,*



## UAS and SmallSat Weekly News

interest in the market is certainly on the rise. <https://dronedj.com/2021/03/12/evtol-air-taxi-projected-to-grow-to-14-7-billion-by-2041/>

### **Estonian Railways use drones to digitize railway assets** Josh Spires Mar. 11th 2021



Estonian Railways brought in Hepta Airborne to [digitize its railway assets](#) and see the benefits drones could bring to the table, or, in this case, the track. The two companies have been trialing the technology's use over the past few months to see if it adds enough value.

Although a railway might seem like a simple piece of equipment as it just looks like a solid chunk of metal, there is a lot more going on. For example, the wires running above the track are attached using insulators, which both can become damaged and are susceptible to wear.

In this case, Hepta Airborne could send the drone up, take a look at all of the insulators along the line, and capture data of the damaged ones or those that aren't connected properly. This then allows a team to go in a fix only the parts that require it, rather than manually going around to every single one to check them.

Andrus Alas, the head of electricity networks in Estonian Railways, said: *"Railway utility inspection is currently conducted visually by our employees visiting the objects on-site. Our wish is to **automate** this process and find ways to evaluate utilities' conditions using modern solutions. The Estonian Railway has a strong interest in developing data systems to have a good overview of the infrastructure. Therefore, we were glad to conduct a pilot project with Hepta Airborne. Our goal is to digitize the whole railway grid in Estonia to improve inspection and maintenance."*

Due to the country's location, the drones were required to operate in cold temperatures, which is actually a big benefit for the thermal cameras. The higher the difference between the ambient temperature and the insulator, the easier it is to see something going wrong.

<https://dronedj.com/2021/03/11/estonian-railways-use-drones-to-digitize-railway-assets/>



## UAS and SmallSat Weekly News

14Mar21

### UAE and Israel collaborate on counter UAS solution INTERNATIONALJOE

PESKETT MARCH 14, 2021



EDGE, a UAE defense group, has agreed on a memorandum of understanding with Israel Aerospace Industries to develop an advanced C-UAS (Counter-Unmanned Aircraft System).

Through leveraging IAI's proven C-UAS solutions that are applied around the world to detect, identify and intercept a broad range of threats, EDGE is leveraging its subsidiary, SIGN4L, a provider of electronic warfare services for national security, to collaborate with the Israeli defense manufacturer.

Comprising 3D radar, COMINT (communications intelligence), and Electro-Optic technologies integrated into a unified command and control system, the C-UAS is fully autonomous requiring **no human intervention**. A series of countermeasures, ranging from soft-kill solutions such as spoofing and jamming, to hard-kill capabilities such as lasers and electromagnetic pulses, are offered based on the level of threat and targeted operating environment.

Both SIGN4L and IAI will leverage their technical capabilities to develop the system in response to customer needs. Further support will be available via IAI's partnership with Belgium Advanced Technology Systems which has a technical and marketing presence in the region.

<https://www.commercialdroneprofessional.com/uae-and-israel-collaborate-on-counter-uas-solution/>

15Mar21

### When Will Remote ID Go into Effect? FAA Announces Date Miriam McNabb March 13, 2021



The FAA has announced when rules on Remote ID will go into effect, along with the newly released regulations on drone Operations Over People and Moving Vehicles and Flight at Night. In a press release published Friday night, the FAA says that the "final rules requiring remote identification of drones and allowing some flights over people, over moving vehicles and at

night under certain conditions will go into effect on **April 21, 2021**." That doesn't mean, however, that pilots need to be immediately concerned about compliance. The rule gives



## UAS and SmallSat Weekly News

manufacturers 24 months AFTER the effective date to include Remote ID on their aircraft and operators 36 months from the effective date to comply.

[Remote ID, Operations Over People, and Flight at Night](#) were released at the very end of last year, and were expected to become effective on March 16 of 2021. However, due to the change in administration, the government decided to postpone the effective date to allow the new administration time to review. <https://dronelife.com/2021/03/13/when-will-remote-id-go-into-effect-faa-announces-date/>

### The Rolls-Royce of Passenger Drones Miriam McNabb March 12, 2021



Vertical Aerospace's Urban Air Mobility solution may be the Rolls-Royce of passenger drones, a phrase synonymous with luxury engineering. Rolls-Royce has [recently announced](#) that their electrical power system will be integrated into Vertical Aerospace's "piloted all-electric vertical take-off and landing vehicle." The aircraft will carry up to four passengers for 120 miles at cruise speeds of over 200mph, and is expected to certify in **2024**, says the announcement. The companies expect the first flight of the Vertical Aerospace aircraft this year.

Providing more evidence that the urban air mobility market continues to grow in importance, Rolls-Royce is [one of several automotive brands](#) collaborating in the sector. "Vertical Aerospace is a key collaboration for Rolls-Royce Electrical as it marks our first commercial deal in the UAM market and builds on previous agreements to work with partners on demonstrator programs," says the announcement. <https://dronelife.com/2021/03/12/the-rolls-royce-of-passenger-drones/>

### SpaceX sets new booster reuse mark with Starlink launch Jeff Foust March 14, 2021



WASHINGTON — A Falcon 9 launched another set of Starlink satellites March 14, with the rocket's first stage setting a record with its **ninth launch and landing**.

The Falcon 9 lifted off from Launch Complex 39A at the Kennedy Space Center at 6:01 a.m. Eastern. The upper stage deployed its payload of **60 Starlink satellites** into orbit 65 minutes later, bringing the size of the broadband internet constellation to **1,260** satellites.



## UAS and SmallSat Weekly News

The rocket's first stage landed on a droneship in the Atlantic Ocean eight and a half minutes after liftoff. That booster was on its ninth flight, a record for the Falcon 9. The rocket, which first launched a Crew Dragon spacecraft on the uncrewed Demo-1 mission in March 2019, later launched the Radarsat Constellation Mission and the SXM-7 satellite for SiriusXM. It launched five Starlink missions before this one, including the booster's previous flight Jan. 20.

<https://spacenews.com/spacex-sets-new-booster-reuse-mark-with-starlink-launch/>

### **How mini drones are being deployed to kill insects** AGRICULTUREHEADLINE NEWS JOE PESKETT MARCH 15, 2021



Miniature drones used in agriculture could have wide-ranging applications as technology advances further, according to a leading expert in indoor UAVs.

Bram Tijmons is CEO of PATS Indoor Drone Solutions, which makes drones designed to target and kill insects harmful to plants, removing the need for insecticides.

But he believes that the tiny drones could be deployed in different scenarios in the future.

“For our specific application – insect control – there are actually numerous indoor environments where our solution can help out. Aside from horticulture, think of food processing or storage for example,” he said.

Tijmons said: “I believe [the drones] can work alongside nature very well. Take for example horticulture – or agriculture in general – again, growers deal with a number of pests threatening their crops. Some pests can be controlled with natural predators, keeping a balance in the eco-system through harmful and beneficial insects.

<https://www.commercialdroneprofessional.com/how-mini-drones-are-being-deployed-to-kill-insects/>

### **Low-Cost Drones Learn Precise Control Over Suspended Loads** Evan Ackerman



This research is by Guanrui Li, Alex Tunchez, and Giuseppe Loianno at the [Agile Robotics and Perception Lab](#) at NYU. As you can see from the video, the drone makes keeping rock-solid control over that suspended payload look easy, but it's very much not, especially considering that everything you see is

running onboard the drone itself at 500Hz— all it takes is an IMU and a downward-facing monocular camera, along with the drone's Snapdragon processor.





## UAS and SmallSat Weekly News

To get this to work, the drone must be thinking about two things. First, there's state estimation, which is the behavior of the drone itself along with its payload at the end of the tether. The drone figures this out by watching how the payload moves using its camera and tracking its own movement with its IMU. Second, there's predicting what the payload is going to do next, and how that jibes (or not) with what the drone wants to do next. The researchers developed a model predictive control system for this, with some added perception constraints to make sure that the behavior of the drone keeps the payload in view of the camera. <https://spectrum.ieee.org/automaton/robotics/drones/lowcost-drones-get-precise-control-over-suspended-loads>

### **Grand Opening of New East Coast UAS Facility at SBY** Sentinel Robotic Solutions Feb 11th, 2021



Sentinel Robotic Solutions participated in the Grand Opening of the first Unmanned Aircraft Systems dedicated hangar on the East Coast for public use. Salisbury Regional Airport's UAS-dedicated hangar is located within its Airport Business Park and includes a dedicated launch and recovery site.

Sentinel Robotic Solutions is the Operator of the brand new 5,000 square foot hangar. All UAS services will be available including pre-coordination to include risk analysis, airworthiness review, spectrum management and airspace coordination including COA applications. Daily onsite operation services include logistics management, project support, air traffic coordination, aviation and ground safety.

The UAS AIC has dedicated office/workspaces, as well as a 55 foot tower for GCS antenna placement. Located near the Atlantic ranges for maritime opportunities, the hangar will host UAS testing and development, partnerships with Universities and High Schools for STEM, and commercial goods delivery via drones. Director of Aviation Programs, Bryce King, explains further "We will get your UAS program or new idea off the ground with our Aviation Professionals, new facilities, access to various airspace and offshore ranges."

<https://www.aviationpros.com/aircraft/unmanned/press-release/21209920/sentinel-robotic-solutions-grand-opening-of-new-east-coast-uas-facility-at-sby>



## UAS and SmallSat Weekly News

15Mar21

### Embry-Riddle Researchers Receive FAA Grants to Assure Drone Safety March 14, 2021 News



Embry-Riddle Aeronautical University researchers recently received four Federal Aviation Administration grants to assess risks and help develop safety protocols for unmanned aerial systems as they are increasingly integrated into such uses as package delivery and aerial taxi services.

The grants, totaling about **\$500,000**, are intended to advance FAA efforts to “integrate UAS safely and efficiently into our nation’s airspace system, ultimately delivering new transportation solutions and economic benefits for the American people,” said Acting U.S. Secretary of Transportation Steven G. Bradbury.

The grants address four different aspects of drone safety — 1) incorporating UAS data into the Aviation Safety Information and Analysis Sharing system, 2) mitigating glitches in drone location systems such as GPS, 3) quantifying the likelihood and potential severity of drone collisions with general aviation and commercial aircraft, and 4) assessing risks associated with drone operation near structures that are collision hazards for manned aircraft.

[https://uasweekly.com/2021/03/14/embry-riddle-researchers-receive-faa-grants-to-assure-drone-safety/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=embry-riddle-researchers-receive-faa-grants-to-assure-drone-safety&utm\\_term=2021-03-15](https://uasweekly.com/2021/03/14/embry-riddle-researchers-receive-faa-grants-to-assure-drone-safety/?utm_source=rss&utm_medium=rss&utm_campaign=embry-riddle-researchers-receive-faa-grants-to-assure-drone-safety&utm_term=2021-03-15)

### Search and rescue drones tested at an offshore wind farm Josh Spires Mar. 15th 2021



DEME Offshore and Sabca have worked together to [test out search and rescue drones](#) at the Rentel offshore wind farm in the North Sea. The trials come as the drones are readied for autonomous surveillance, rescue, and detection missions in the near future.

[The drone trial](#) is the **first** commercial, cross-border, beyond visual line of sight drone operation at an offshore wind farm. Rather than just using a quadcopter drone, the trials also saw a fixed-wing drone hit the sky.

The fixed-wing drone is a long-endurance model that took off **35 km** away from the wind farm on the land and is expected to be used for surveying and surveillance operations.



## UAS and SmallSat Weekly News

The quadcopter will take off from a platform that is a part of the wind farm and will be used for inspections and cargo flights from the substation and vessels. This is also the drone used on search and rescue operations and to drop a buoy if someone has gone overboard.

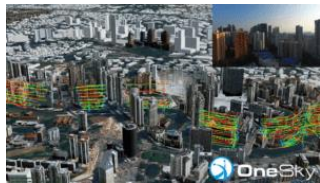
The drones also use artificial intelligence to automatically process the images and other data captured during the flights. This will allow many of the jobs currently done by humans to become fully automated, lowering operating costs and response times. The system can also alert a response crew if they are needed.

The video goes through all of the possible use cases for the drones. While it focuses on the wind farm, the video also shows how drones can be used to improve the environment around the farm as well. <https://dronedj.com/2021/03/15/search-and-rescue-drones-tested-at-an-offshore-wind-farm/#more-52364>

**16Mar21**

### UTM in Singapore: OneSky Works on UTM Services for a Unique Urban

**Environment** Miriam McNabb March 15, 2021



The commercial drone industry, and BVLOS drone delivery, took a big step forward last week as officials demonstrated the first working UTM prototype in Singapore. U.S. company [OneSky](#) joined global technology firm Nova Systems on the project to provide advanced unmanned traffic management capabilities in Singapore's unique urban environment.

"This brings to a close a two-year consortium project, led by Nova, and co-founded as part of the UAS Call-For-Proposals by the Ministry of Transport and Civil Aviation Authority of Singapore. It marks a **significant milestone** in Singapore's journey towards a future driven by UAS technology, as private and government sector stakeholders look deeper into the possibility of the large-scale, integrated deployment of such technology in Singapore's unique urban environment."

"To conclude the trials, a UTM demonstration was held for CAAS on 10 March 2021. Using a mix of live flights and simulations, the demonstration showcased key developments and findings from the team's work in UTM technologies over the past two years, in particular the handling of the mass deployment of drones flying Beyond Visual Line of Sight."

<https://dronelife.com/2021/03/15/utm-in-singapore-onesky-works-on-nationwide-utm-services-for-a-unique-urban-environment/>



## UAS and SmallSat Weekly News

### **Censys Develops VTOL UAVs & Command Vehicles for BVLOS Operations** 10 Mar 2021 Mike Ball

[Censys Technologies](#), a leading developer of fixed-wing UAVs for long-range and Beyond Visual Line of Sight commercial and defense operations, has partnered with Unmanned Systems Technology to demonstrate their expertise in this field. The 'Platinum' profile highlights how their remote sensing drone solutions can be used for a wide range of applications, including agricultural use, mapping and surveying, surveillance, and search and rescue, and also showcases their mobile drone command vehicles.



The [Sentaero v2BVLOS](#) is a mid-to-long range UAV for over-the-horizon and BVLOS operations. Featuring vertical takeoff and landing functionality, the versatile platform can be operated from a minimal footprint and can cover much greater distances than a line-of-sight-limited drone.

The v2BVLOS incorporates Iris Automation's state-of-the-art Casia detect-and-avoid for the utmost in safety during long-range operations. Integrating a forward-facing electro-optical sensor and an ADS-B receiver allows visual observers to spend less time directly observing the drone and more time on the surrounding airspace, adding risk mitigation and cutting down on crew size.

Hot-swappable payloads can be interchanged on the drone in just 30 seconds, allowing the platform to be quickly and easily reconfigured in the field for a variety of different mission requirements. [https://www.unmannedsystemstechnology.com/2021/03/censys-technologies-develops-vtol-uavs-command-vehicles-for-bvlos-operations/?utm\\_source=UST+eBrief&utm\\_campaign=9193ff0473-eBrief\\_2021\\_16Mar&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-9193ff0473-111778317](https://www.unmannedsystemstechnology.com/2021/03/censys-technologies-develops-vtol-uavs-command-vehicles-for-bvlos-operations/?utm_source=UST+eBrief&utm_campaign=9193ff0473-eBrief_2021_16Mar&utm_medium=email&utm_term=0_6fc3c01e8d-9193ff0473-111778317)

### **Texas Department of Public Safety Awards DroneSense SaaS Contract** March 16, 2021 News



DroneSense, the Austin-based developers of the DroneSense Public Safety Drone Platform, has been awarded an agreement with the Texas Department of Public Safety to improve situational awareness by centralizing and integrating massive data sets and creating the ideal environment for multiple agencies to



## UAS and SmallSat Weekly News

collaborate and work together effectively to **face any public safety crisis**. DPS awarded DroneSense the contract with options to renew for multiple years.

Built for pilots, operators, and administrators to communicate easily and effectively with one another and share mission-critical information, DroneSense allows for seamless communication and collaboration while supporting a wide variety of drones, tablets, and sensors. The hardware agnostic platform means agencies can utilize DroneSense while using preferred hardware combinations from manufacturers including DJI, Parrot, and Autel.

It provides an unmatched level of situational awareness, allowing operators and teams to **coordinate operations from anywhere**. Centralizing, standardizing, and securing massive amounts of raw data across multiple agencies makes processing and parsing through the information much faster, allowing teams to make timely, informed decisions to safely complete the mission. [https://uasweekly.com/2021/03/16/texas-department-of-public-safety-awards-dronesense-saas-contract/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=texas-department-of-public-safety-awards-dronesense-saas-contract&utm\\_term=2021-03-16](https://uasweekly.com/2021/03/16/texas-department-of-public-safety-awards-dronesense-saas-contract/?utm_source=rss&utm_medium=rss&utm_campaign=texas-department-of-public-safety-awards-dronesense-saas-contract&utm_term=2021-03-16)

## DroneUp® Acquires Web Teks



**Virginia Beach, VA (March 16, 2021)** -- DroneUp, LLC, a leading global provider of drone technology and services, announced today that it had acquired Web Teks, Inc.

Web Teks, a pioneer in enterprise software solutions unique to the UAS industry, designed and developed all of DroneUp's patented and proprietary platforms. The combination will create a closely collaborative environment that will allow DroneUp to accelerate innovation further.

DroneUp's service and business contributions have evolved to meet the demand of dynamic and maturing markets. Web Teks, a contractor of DroneUp's since its founding in 2016, collaborated in building their pilot network and established the FAA's Low Altitude Authorization and Notification Capability integration furthering the development of DroneUp's capabilities. John Vernon, Chief Technology Officer, will lead the post-acquisition team. For more information on Web Teks, please visit [webteks.com](http://webteks.com). Amy Wiegand [amy.wiegand@droneup.com](mailto:amy.wiegand@droneup.com)



## UAS and SmallSat Weekly News

### **Martin UAV Unveils the V-BAT 128, Newly Upgraded V-BAT Model** March 16, 2021 News



[Martin UAV](#), a leading advanced aviation technology manufacturer in the United States, today announced the public release of the latest unmanned aircraft system, the V-BAT 128, for defense and commercial use, including search and rescue, firefighting, logistic resupply, and [energy and oil and gas operations](#).

At the Army Expeditionary Warrior Experiment, Martin UAV demonstrated its upgraded version of the V-BAT featuring an increase in its power, payloads and endurance over the course of several weeks. The V-BAT flew numerous missions, ideal to showcase the VTOL and the small footprint of the vehicle as well as the aircraft's ability to transition from take-off to a vertical hover and **persistent stare capability** while maintaining a sensor line of sight despite difficult terrain.

Heath Niemi, chief development officer said "We're proud to make the V-BAT available to the broader market and to provide more power and payload that can be transported in the bed of a pick-up truck or inside a Black Hawk." [https://uasweekly.com/2021/03/16/martin-uav-unveils-the-v-bat-128-newly-upgraded-v-bat-model/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=martin-uav-unveils-the-v-bat-128-newly-upgraded-v-bat-model&utm\\_term=2021-03-16](https://uasweekly.com/2021/03/16/martin-uav-unveils-the-v-bat-128-newly-upgraded-v-bat-model/?utm_source=rss&utm_medium=rss&utm_campaign=martin-uav-unveils-the-v-bat-128-newly-upgraded-v-bat-model&utm_term=2021-03-16)

### **Swiss company looks to use drones to capture weather data** Josh Spires Mar. 16th 2021



[Swiss company Meteomatics](#) is working with Thales to explore using drones to capture meteorological data for faster, more accurate, and cheaper weather forecasts. The company hopes to replace the traditional balloons, satellite, airborne, and ground-based techniques.

Current [weather forecasting methods](#) are **expensive**, only provide data on a specific area as it isn't portable, and can **fail to create accurate data** during extreme weather conditions. Some of the equipment used can also only do one thing, which results in the need for more equipment, therefore, raising costs.



## UAS and SmallSat Weekly News

Using a drone equipped with the correct sensors and modules can **solve all the issues** mentioned above. Not only isn't the drone affected by weather conditions, but it can also be flown into any area needing accurate data while keeping equipment costs down.

The company has created an observing system that can measure detailed readings of the temperature, humidity, air pressure, and wind to mount onto the drones. This allows the drones to predict things like hail or extreme weather conditions. The company's Meteobase ground-based system will also be used with the drones to act as a communication link with the control center. <https://dronedj.com/2021/03/16/swiss-company-looks-to-use-drones-to-capture-weather-data/>

**17Mar21**

### **Volocopter raises \$240m in mission to develop air taxis for cities around the world** HEADLINE NEWS JOE PESKETT MARCH 17, 2021



The latest round of funding means Volocopter has raised €322 million so far. The funding will be used to solidify Volocopter's leading position in the UAM market by bringing the VoloCity, the battery-powered air taxi for cities, to certification and by accelerating the launch of its first commercial routes.

Volocopter is in the final stages of providing new, sustainable mobility options for cities around the world. Their future services range from electric autonomous air taxis flying passengers directly and safely to their destinations to transporting goods with the company's VoloDrone.

Having ten years of development experience, Volocopter is a leader in the urban air mobility space. As the first and only electric vertical take-off and landing company to receive Design Organisation Approval by the European Union Aviation Safety Agency, Volocopter expects its first commercial air taxi routes to be opened within the next **two years**.

<https://www.commercialdroneprofessional.com/volocopter-raises-240m-in-mission-to-develop-air-taxis-for-cities-around-the-word/>

### **ONE WAY TO DETECT (AND PREVENT) DRONE CRASHES BEFORE THEY HAPPEN** March 17, 2021 Sally French The Drone Girl News

It's no secret that drones have proven themselves an essential tool in enterprise and military applications. They **save time**. They save money. And they generally tend to improve safety. But



## UAS and SmallSat Weekly News

drone crashes are still a genuine concern — and one American drone company has a plan to mitigate them.

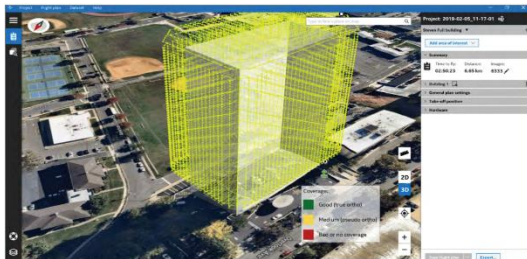
Colorado-based Black Swift Technologies has developed an algorithm that can provide early warning and diagnostics of potential critical system failures on drones.



The U.S. Air Force in March announced that it had awarded Black Swift Technologies a contract to develop software capable of leveraging that algorithm to predict drone system failures before they happen. For now, it's a small, **Phase I** award of just \$50,000, set to run over the next six months. If the Air Force likes the tech, Black Swift could receive an additional \$750,000 in Phase II money, and potentially several million in matching money as part of a Phase III should that happen.

With the funding, Black Swift is set to develop software that would use what's called **"unsupervised machine learning for anomaly detection."** In a nutshell, Black Swift would be able to construct a virtual model of how an aircraft *should* behave across a wide range of missions and flight conditions — and then watch for instances that violate these models.  
<https://www.thedronegirl.com/2021/03/17/black-swift-drone-crashes/>

## Transforming Building Inspection in NYC PETER GUTIERREZ MARCH 16, 2021AIR



High-rise building inspection in “The Big Apple” is transitioning from conventional scaffold-based to more efficient and economical drone-based approaches. One company, Lyndhurst, New Jersey-based Y Bird Airways, is making waves in an expanding sector.

Y Bird Airways CEO Jerson Batista began the company in his college dorm room in 2017 and in three years has transformed it into a seven-figure-earning concern. We started with one drone and now we have four, and we're ordering three more from Topcon.”

Y Bird is looking to add new capabilities to its service portfolio, including **automatically generated 3D digital twins of entire buildings**, Batista said. “We can bring the building to your computer; we can do the elevation and line drawings. We can do a lot more with that data than just the photo, while saving a lot of money. We've seen our market doubling and tripling every





## UAS and SmallSat Weekly News

year since we've been in business, and we expect that to continue.”

<https://insideunmannedsystems.com/transforming-building-inspection-in-nyc/>

### Windhover Labs Introduces US-Made Drone Flight Computer March 16, 2021 News



Windhover Labs, an emerging leader in open and reliable flight software and hardware, announces the upcoming availability of its first hardware product, a low-cost modular flight computer for commercial drones and small satellites. This new line of flight computers was created with hardware and software developed in the United States and will be available as a low-cost consumer model as well as mission critical professional models with features that facilitate integration into the National Air Space.

Windhover Labs is veteran-owned and self-funded by a team with 15+ years in human space flight software development. As recognized experts in the field, their first product is built on NASA-developed flight software framework that has been certified for human use. This framework has been in use on space vehicles since 2009 and follows commercial aircraft and government safety and quality standards. Windhover's software and hardware is designed for flying drones **beyond visual line of sight** with a composable and portable design that allows flight software to be easily ported to multiple platforms. Windhover Labs plans to certify commercial models under FAA rules to allow autonomous flight within the National Air Space.

[https://uasweekly.com/2021/03/16/windhover-labs-introduces-us-made-drone-flight-computer/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=windhover-labs-introduces-us-made-drone-flight-computer&utm\\_term=2021-03-17](https://uasweekly.com/2021/03/16/windhover-labs-introduces-us-made-drone-flight-computer/?utm_source=rss&utm_medium=rss&utm_campaign=windhover-labs-introduces-us-made-drone-flight-computer&utm_term=2021-03-17)

### TideWise, STABLE complete autonomous oil spill detection trial Josh Spires Mar. 17th 2021



TideWise and STABLE have announced successful testing of their ARIEL project, which saw a drone autonomously take off from the USV Tupan. The drone is housed on the tiny crewless ship to monitor and detect oil spills.

The trial was done in December 2020, with the announcement only being made this week by the companies. The USV Tupan drone boat was equipped with a **stabilized launch pad** from STABLE, which allowed the drone to stay flat no matter the conditions on the water.



## UAS and SmallSat Weekly News

The two companies also got the help of Repsol Sinopec Brasil through the Brazilian National Agency of Petroleum, Natural Gas, and Biofuels financing scheme to complete the trials.

The drone and the ship communicated with one another to share key information like their location to make landing a little easier. Once the drone was close enough to the USV Tupan, a bottom-facing camera on the drone detected the landing pattern on the landing pad. From there, the drone slowly maneuvers its way down to the boat and slowly touches down to prevent damaging anything or falling overboard. <https://dronedj.com/2021/03/17/tidewise-stable-complete-autonomous-oil-spill-detection-trial/#more-52652>

**18Mar21**

### **Dubai petrol firm uses drones to shoot tree seeds into the desert** HEADLINE

NEWS JOE PESKETT MARCH 18, 2021



Dubai petrol delivery group CAFU has employed drones to plant thousands of tree seeds in the UAE desert as part of its strategy to become carbon neutral.

CAFU has completed two rounds of planting with over **10,000 seeds in the desert this year using drone technology** and first-of-its-kind planting mechanism designed by the CAFU engineers in the region.

Last year, the team at CAFU went through an R&D process to test optimal germination of the Ghaf seed in the harsh desert landscape, which shed light on certain requirements such as the need for a seedball mixture with the right ratio of nutrients to help the seeds germinate, and these seedballs needed to be planted to a depth of 1 centimeter.

CAFU's team of engineers have developed an in-house pressurized air mechanism built into the drone, which shoots the seedballs to the required depth, while also geotagging the location to track its progress. So far, the team has undergone two rounds of planting in the Mleiha Desert and expect germination over the coming months.

<https://www.commercialdroneprofessional.com/dubai-petrol-firm-uses-drones-to-shoot-tree-seeds-into-the-desert/>



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### 2021 DRONE TECH: WHY LIDAR IS ONE OF THE HOTTEST TECHNOLOGIES THIS

**YEAR** March 18, 2021 Sally French The Drone Girl News



LiDAR is about to be a huge trend in terms of investment, technological development, implementation and sales for the upcoming year. LiDAR is short for Light Detection and Ranging. It is a type of remote sensing method that uses light in the

form of a pulsed laser to measure ranges to the Earth. Put a LiDAR sensor on a drone, and you can create high-resolution digital surfaces, terrain and elevation models. Since LiDAR can penetrate through light cover and is [more accurate than other mapping methods like photogrammetry](#), it's seen as **essential** for people who might need to conduct urban surveys and see through objects on the ground like cloth or wires, or people who want to map overgrown farmland or even shallow water.

Among the use cases for LiDAR in drones? Archaeology, where drones can rediscover 'lost sites' and map them in **3D** in a few minutes. Mine inspections, where drones double as a collision detection tool to conduct simultaneous localization and mapping. And forestry, where drones can measure canopy heights, coverage, tree density and the location and height of individual trees. <https://www.thedronegirl.com/2021/03/18/lidar-2021-drone-tech/>

### Skyfront Drone Sets Endurance and Distance Record of 13 hours, 4 minutes March 18, 2021



MENLO PARK, Calif.--([BUSINESS WIRE](#))--Skyfront, a manufacturer of long endurance gasoline-electric hybrid drones, broke the multirotor drone flight time record by staying airborne for 13 hours and 4 minutes and traveling a distance of **205 miles**. The world record-breaking flight was achieved by the Skyfront Perimeter 8—the company's most

advanced eight rotor drone designed to meet and exceed the capabilities of helicopters. The historic event was captured via the drone's onboard 360 cameras, which can be seen here: <http://bit.ly/SkyfrontWorldRecord>

The secret behind their record-breaking flight is the Skyfront fuel-injected hybrid gasoline-electric powertrain. The powertrain replaces the battery and extends flight times by a factor of **twenty**. It is optimized for power and efficiency and is integrated into the unmanned aerial vehicle design to reduce weight and power consumption.



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Founded in 2014, Skyfront drones are designed to solve flight time limitations and unlock the economic potential of UAVs. Drone operators are freed from the fear of running out of power and from the hassle of constantly swapping and charging batteries.

[https://www.businesswire.com/news/home/20210318005319/en/Skyfront-Drone-Sets-Endurance-and-Distance-Record-of-13-hours-4-minutes?utm\\_source=marketo&utm\\_medium=email&utm\\_campaign=newsletter&utm\\_content=newsletter&mkt\\_tok=NzU2LUZXSi0wNjEAAAF75XjbJUmlJ9Qcv6mdZarCv7kj1FUPQj3EolROeosh\\_4zpYZjFwpMzRspHMMvLMx03LjxObPeTxhvgfgCosS-t14Tj51IRDMPHIXc\\_o--OxKR](https://www.businesswire.com/news/home/20210318005319/en/Skyfront-Drone-Sets-Endurance-and-Distance-Record-of-13-hours-4-minutes?utm_source=marketo&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter&mkt_tok=NzU2LUZXSi0wNjEAAAF75XjbJUmlJ9Qcv6mdZarCv7kj1FUPQj3EolROeosh_4zpYZjFwpMzRspHMMvLMx03LjxObPeTxhvgfgCosS-t14Tj51IRDMPHIXc_o--OxKR)

19Mar21

**Flytrex secures \$9.3M in funding from venture and tech grant** Josh Spires Mar. 18th 2021



[Drone delivery company Flytrex](#) has announced it has secured \$9.3 million in funding from venture companies and a technology grant. The funding round saw the company receive \$8 million led by Benhamou Global Ventures and \$1.3 million from the Israel Innovation Authority. The investments will be used to [expand its presence](#) in the United States and improve its production and research and development capabilities.

The news comes shortly after Flytrex began participating in the Federal Aviation Administration's UAS Integration Pilot Program and the newer DEYOND program. The FAA has also listed Flytrex as one of the drone companies to gain an airworthiness certification.

Recently, Flytrex began delivering goods in partnership with **Walmart** to people living in **Fayetteville, North Carolina**. The delivery drones will be flown using a cloud-based system to deliver the goods right to the customer's door rather than a nearby depot or pick-up point.

The Flytrex drone can fly at 32 miles per hour for 3.5 miles and back at an altitude of 230 feet. It can carry 6.6 pounds of groceries — around six to eight hamburgers — in winds of 18 miles per hour. <https://dronedj.com/2021/03/18/flytrex-secures-9-3m-in-funding-from-venture-and-tech-grant/>

**Israel's skies are filled with delivery drones in a huge trial** Josh Spires Mar. 18, 2021



[Israel's skies](#) are now filled with delivery drones making **300 flights per day** as a part of a larger drone integration trial. The trial aims to

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## UAS and SmallSat Weekly News

see how drones from **different manufacturers** can communicate with one another for safe flights.

The Israel Urban Air Mobility Initiative is running the trial under the Israel Innovation Authority. Ayalon Highways, a state-owned highway builder in the country, created the Transportation Ministry, Civil Aviation Authority, and the Alternative Fuels Administration and Smart Mobility Initiative.

At any one time, there will be 20 drones in the air flying no higher than 400 feet above the ground, with a required spacing of at least 200 feet between each other.

The first phase of the trials will see each drone provider fly in a small designated area to ensure the drones work fine independently. All the drones from all the companies will then join forces and fly in one area together. During this phase, it is expected that the drones will complete around **300 flights per day**.

[Eight companies](#) have been chosen to work with the government on the trial, providing everything from drones to software platforms. The companies are High Lander Aviation, Cando Drones, HarTech Technologies, CopterPix, Simplex Mapping, Down Wind, Airways Drones, and F.T. These companies will receive around \$1.8 million from the Innovation Authority to cover about half of the tests' costs. The rest of the money will come from Ayalon Highways and the drone companies themselves. All the drones' data will be streamed to a central platform that will ensure the drones are sticking to the correct route and don't get in the way of the other drones. <https://dronedj.com/2021/03/18/israels-skies-are-filled-with-delivery-drones-in-a-huge-trial/#more-52831>