



## UAS and SmallSat Weekly News

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### Flirtey Begins Drone Delivery Demonstrations in the Largest Industrial Center in the US December 20, 2019 News



Flirtey announced today it has begun routine drone delivery demonstrations in a designated area inside the Tahoe-Reno Industrial Center (TRI Center), located in Nevada. The demonstrations are in preparation for routine food delivery trials to designated points on the TRI Center park. It is the largest industrial center in the United States and is home to more than **100 companies**, warehouse logistics centers, and fulfillment centers, including Tesla's Gigafactory, Walmart, Google, Panasonic and The Home Depot. These facilities employ approximately **25,000 people**.

Routine drone delivery demonstrations are occurring several days a week at multiple times per day. Flirtey plans to ramp up flights and delivery demonstrations as this next phase of operations continues. "These trials are the next milestone in bringing drone delivery to businesses in America, and consumers in Nevada will be among the first to have access to on-demand drone deliveries," said Flirtey Founder and CEO Matthew Sweeny. "We look forward to expanding Flirtey drone delivery nationwide." [https://uasweekly.com/2019/12/20/flirtey-begins-drone-delivery-demonstrations-in-the-largest-industrial-center-in-the-us/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_daily\\_newsletter\\_12\\_20\\_2019&utm\\_term=2019-12-20](https://uasweekly.com/2019/12/20/flirtey-begins-drone-delivery-demonstrations-in-the-largest-industrial-center-in-the-us/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_12_20_2019&utm_term=2019-12-20)

### SkyDrive Launches Test Flights of First-ever Cargo Drone December 20, 2019 News



SkyDrive Inc., a leading flying-car developer, has successfully launched test flights of a cargo drone which could **revolutionize** the way heavy goods are transported and speed up the movement of equipment in remote locations. The first operational testing took place earlier this month in Toyota City, Japan. It was carried out to test the technology by moving heavy equipment in remote locations.

This new technology has been tested with a load capacity of 30kg. There is the potential to achieve greater loads of 50kg and **80kg**, according to demand. The cargo drone also has the potential to change the way products are moved from manufacturers to warehouses and onto depots.



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SkyDrive is developing the cargo drone for use in industries that carry heavy materials on complex terrain such as slopes, mountain valleys, overpasses, power transmission towers, civil engineering/construction sites and agricultural fields. [https://uasweekly.com/2019/12/20/skydrive-launches-test-flights-of-first-ever-cargo-drone/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_daily\\_newsletter\\_12\\_20\\_2019&utm\\_term=2019-12-20](https://uasweekly.com/2019/12/20/skydrive-launches-test-flights-of-first-ever-cargo-drone/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_12_20_2019&utm_term=2019-12-20)

### **Pentagon Wants to Spark an American Small-Drone Industry** HEATHER

KULDELLMANAGING EDITOR, NEXTGOV DECEMBER 18, 2019



Acquisition chief Ellen Lord wants domestic options for small UAVs— and for defensive systems that can bring them down.

**The Defense Department expects to focus on** domestically created and funded unmanned aerial systems and counter-unmanned aerial systems in 2020 as part of its ongoing

efforts to secure its supply chain.

Under Secretary of Defense for Acquisition and Sustainment Ellen Lord repeatedly heard the need for systems that detect small, hobbyist-style drones as she traveled to air bases in Qatar, Iraq, and Afghanistan through the course of the year. The department already hosted an event to kickstart U.S. investment into the field dominated by foreign companies. Last month, Defense partnered with Texas A&M University for a Drone Venture Day to showcase national security-related work from 39 U.S. UAS and counter-UAS manufacturers and 12 trusted capital providers. Those capital partners came from what Lord called “clean money”: small businesses that started with U.S. government funds at universities and labs.

“We have found way too many times that we have what I’ll call ‘adversarial capital’ coming into companies, and we then have to go through what I’ll call ‘defensive measures,’ such as the Committee on Foreign Investment in the United States, to stop that, to make sure we have a secure and resilient supply chain,” she explained.

<https://www.defenseone.com/technology/2019/12/pentagon-searching-domestic-drone-options/161956/?oref=d-river>



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### Zero Zero Announces The V-Coptr Falcon, Ushering In A New Chapter In Drone Technology December 19, 2019 News



Zero Zero Robotics announces its newest drone, the world's first consumer bicopter: V-Coptr Falcon. The V-shaped dual-rotor design marks a significant departure from the universal quad-rotor design consumers are familiar with. With a multi-patented dual rotor propulsion system and proprietary flight control technology, V-Coptr Falcon's flight time significantly surpasses industry standards, pushing flight time to an unprecedented **50 minutes**.

It features a three-axis mechanical gimbal with a yaw control range of  $\pm 80$  degrees. It shoots 4K video at 30fps and 12-megapixel pictures. It boasts a 1/2.3 inch CMOS by Sony and a Qualcomm ISP. The patented blade design and precise configuration of V-shaped dual rotors combined with a slower rotation of the propellers allow Falcon to create lift with higher efficiency and a lower noise profile.

Utilizing Visual Inertial Odometry and a front-facing stereo camera, the V-Coptr Falcon can map its surroundings, detect obstacles, and avoid collisions in real time.

[https://uasweekly.com/2019/12/19/zero-zero-announces-the-v-coptr-falcon-ushering-in-a-new-chapter-in-drone-technology/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_daily\\_newsletter\\_12\\_19\\_2019&utm\\_term=2019-12-19](https://uasweekly.com/2019/12/19/zero-zero-announces-the-v-coptr-falcon-ushering-in-a-new-chapter-in-drone-technology/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_12_19_2019&utm_term=2019-12-19)

### This Drone Company May Change the Way You Think About Take-Out Forever

Miriam McNabb December 19, 2019



Manna.aero, which the company describes as “the world's first aviation-grade B2B drone delivery ‘as-a-service’ company” has just raised about **\$5 million** to get off the ground.

Founded in 2018 by Bobby Healy, former CTO of CarTrawler and Eland technologies, Manna is getting major buzz. It uses custom-designed drones to deliver food directly from restaurants and central kitchens to consumers' homes. The food is packaged and travels in the drone's cargo bay – and is delivered by lowering the cargo package to the



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customer, rather than landing the drone. The company also says that the drone can deliver in all weathers – hail, rain or snow. Manna’s drones are first and foremost, safe: with a simple service envelope (2 kilos of food in a 2 km radius) and built in redundancies. In addition, the drones are **quiet**: no louder than the average conversation to a person on the ground.

Manna scored a major partnership in Ireland, signing an agreement with food delivery service Flipdish last summer. With this new funding, Manna hopes to be an emerging leader in the space – launching commercially in the U.S. and Europe in “early 2020.”

Food delivery is an important step in regularizing drone delivery. It’s an application that offers a huge opportunity to gather flight data, helping regulatory agencies make informed decisions – and it introduces a wider public to the beneficial aspects of drone technology. Even if that’s just a hot hamburger to start with. <https://dronelife.com/2019/12/19/this-drone-company-may-change-the-way-you-think-about-take-out-forever/>

22Dec19

### **Drones ‘will keep the port safer,’ commissioner says, as LA Port prepares to launch program** DONNA LITTLEJOHN [dlittlejohn@scng.com](mailto:dlittlejohn@scng.com) Daily Breeze December 20, 2019



The Port of Los Angeles is completing training and developing protocols to make use of unmanned aerial system devices for harbor tasks such as mapping, surveys, videos and photography. Los Angeles Port Police also will be using the technology for law enforcement. Could the use of a port drone have averted a tragic [2017 helicopter crash](#) into the harbor?

Los Angeles Port Police gave the presentation to harbor commissioners on Thursday, Dec. 19, saying that the UAS devices will have a significant use in mapping and photography so that assignments such as the one in 2017 might be handled without the potential danger.

Los Angeles Port Police Deputy Chief Randy Allen told commissioners that the technology is becoming widespread throughout law enforcement and will soon be implemented by the Los Angeles Port Police. From a police perspective, Allen said, there are emergency and search-and-rescue operations in which unmanned craft can be especially useful. And, Allen added, searches can be conducted more safely without officers involved.



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Allen assured commissioners that strict protocols were being put in place to guard against privacy breaches and abuse. He said there will be “strict oversight and accountability.”

<https://www.dailybreeze.com/2019/12/20/la-port-preparing-to-launch-unmanned-drone-technology/>

23Dec19

### **This Drone Delivery Service Was Dreamed Up by a Doctor Who Used to Be a Pilot** Aaron Pressman December 20, 2019



*A drone delivers lab samples to Wakemed Hospital in Raleigh*

When ear, nose, and throat surgeon Stuart Ginn was doing his residency at Stanford University a few years ago, he had some unusual expertise for someone in the medical profession: he's a former professional pilot.

While at Stanford from 2011 to 2015, a tiny California drone startup called Matternet caught Ginn's eye. The startup, which is backed by [Boeing](#), Sony, and others, got permission two years later, in 2017, to test its healthcare service concept in Switzerland, flying medical samples from doctors' offices to hospital labs in several cities.

At the time, WakeMed Hospital depended on a network of couriers in cars to ferry patients' samples between a scattered group of local doctors' offices and its main pathology lab. In charge of innovation at the hospital, Ginn sensed an opportunity to improve the system by using drone deliveries to avoid traffic tie-ups, long courier routes, and other delays.

Ginn brought in his friends from Matternet, other drone-related companies, and the state's transportation agency to create a flying network to replace the automotive couriers.

Once the concept proved sound, delivery giant [UPS](#) joined as a partner, which helped the program win expanded permission from the FAA to start actual commercial trials. "It was like the adults showed up at the party," Ginn says. This March, WakeMed's UPS-backed drone service was [cleared for daily activity](#), **replacing courier pickups entirely** for one doctor's office near the hospital lab. Since the announcement, it has made almost **2,000 successful flights** without a mishap, UPS says. <https://fortune.com/2019/12/20/wakemed-drone-delivery-ups-matternet/>





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### **SF Fire Department expects maiden voyage of drone next year** JOSHUA SABATINI

Dec. 22, 2019 [NEWS THE CITY](#)



After **years** of planning, San Francisco’s fire department finally expects to purchase a drone and send it soaring into the skies early next year.

In 2017, The City’s technology committee [adopted](#) a citywide drone policy that set rules for how departments can deploy them, including having to adopt a specific drone use policy of their own.

The Fire Commission has talked about putting a drone up in the air since 2017, but only now does it appear like that will happen. The commission approved its drone use policy earlier this year, but the debate over the policy took time.

There were issues around the commission’s request to use the drone at night with lights — a request that ultimately was granted in cases of emergency. The policy also allows the department to bypass some of the more restrictive requirements in COIT’s citywide policy in the event of an emergency, such as not having to notify owners of historic buildings if flying within 500 feet of them or the Port of San Francisco, when flying over the waterfront. Since The City is using a federal homeland security grant to purchase the drone, the policy also required federal review.

“This has been a very steep learning curve for us,” Covington said. “I think that we all feel much better and also feel a sense of accomplishment when it takes its maiden voyage.”

<https://www.sfexaminer.com/news/sf-fire-department-expects-maiden-voyage-of-drone-next-year/>

### **Analysts say Alphabet, UPS have early edge in delivery’s next frontier: drones**

DEC 21 2019 Michael Sheetz@THESHEETZTWEETZ



#### **UPS wins approval to operate nationwide fleet of drones**

Next year, maybe your holiday gifts will be delivered by drone.

The world’s biggest players in logistics and packages are racing to make commercial drone delivery a reality, with

Loop Capital Markets saying “[UPS](#) and [Alphabet](#) have the early lead” on [Amazon](#), [FedEx](#) and others.



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“The emerging US drone operators are upgrading from constrictive drone-specific regulatory frameworks and essentially shoehorning their unmanned vehicles into more flexible and expansive FAA rule sets,” Loop Capital Markets wrote in a note to investors last month.

Last mile is the final step in the delivery process, where a company takes a package from a distribution center to its destination. BMO estimates that last mile costs represent between 50% and 60% of total freight costs. But the firm also noted that delivering small packages, a major portion of last mile, “is the most profitable segment of the global goods transportation industry.” The lucrative potential of a last mile drone network is why Loop says “everyone is watching” Amazon. The firm estimated that **a fleet of 100,000 drones would save Amazon \$1.2 billion per year.** <https://www.cnbc.com/2019/12/21/analysts-alphabet-ups-have-edge-in-deliverys-next-frontier-drones.html>

### **NATO Selects Counter-Drone Systems for Anti-Terrorism** 23 Dec 2019 Mike Ball



[Fortem Technologies](#) announced that it has been selected by NATO to demonstrate its SkyDome Network defense platform. It was identified for the program for its detection, classification and ThreatAware platform and for its **autonomous** drone interceptor – DroneHunter. The program seeks to evaluate mitigation solutions for the emerging threat of small, dangerous UAVs and is focused on the **engagement** part of the kill chain.

“We are thrilled to be selected by NATO to further showcase the power and precision of our DroneHunter, the most advanced autonomous **AI-enabled** drone interceptor in the world,” said Fortem CEO, Timothy Bean. “Most systems that try to defend against criminal drones fail because 99% of the risk is from rogue drones that can no longer be jammed or hacked. With over **3650 kills**, the DroneHunter not only detects and pursues threatening drones but also delivers ordinance to the swarm or offending aircraft. It nets and captures the offending drone and tows it to a safe location for forensic analysis.”

[https://www.unmannedsystemstechnology.com/2019/12/nato-selects-counter-drone-systems-for-anti-terrorism/?utm\\_source=UST+eBrief&utm\\_campaign=4462b9257e-eBrief 2019 23 Dec&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-4462b9257e-119747501](https://www.unmannedsystemstechnology.com/2019/12/nato-selects-counter-drone-systems-for-anti-terrorism/?utm_source=UST+eBrief&utm_campaign=4462b9257e-eBrief%2019%2023%20Dec&utm_medium=email&utm_term=0_6fc3c01e8d-4462b9257e-119747501)





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### **New Drones Designed for Climate Change Research & Anti-Poaching** 23 Dec 2019

Mike Ball



The [University of Southampton](https://www.unmannedsystemstechnology.com/2019/12/new-drones-designed-for-climate-change-research-anti-poaching/) has announced that its engineering department has launched a new student-led research program to develop new unmanned aerial vehicles to fight back against climate change and poaching. The launch of the new scheme follows a £15,000 donation from Southampton alumnus and technology entrepreneur Dr Ewan Kirk.

The new Turner-Kirk UAV Research Support Program will fund three groups of fourth-year students within the engineering department. The students' research will focus on ways to improve the efficiency and extend the battery life of drones, with a view to developing new ways to adapt existing drones on an inexpensive basis. The research will also focus on studying novel aircraft configurations designed to minimize energy requirements.

The student team will also undertake a field trip to Guatemala to monitor a live volcano using the new technology in collaboration with the University of Bristol.

[https://www.unmannedsystemstechnology.com/2019/12/new-drones-designed-for-climate-change-research-anti-poaching/?utm\\_source=UST+eBrief&utm\\_campaign=4462b9257e-eBrief\\_2019\\_23\\_Dec&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-4462b9257e-119747501](https://www.unmannedsystemstechnology.com/2019/12/new-drones-designed-for-climate-change-research-anti-poaching/?utm_source=UST+eBrief&utm_campaign=4462b9257e-eBrief_2019_23_Dec&utm_medium=email&utm_term=0_6fc3c01e8d-4462b9257e-119747501)

### **This Company is Proving Drones and Manned Aircraft Can Be an Excellent Team**

Miriam McNabb December 23, 2019



While most of the bad publicity around “rogue drones” comes from a perceived (and sometimes real) danger of interference between unmanned and manned aircraft, French company Donecle is proving that the manned aircraft industry can benefit from drone technology too.

We first saw a demonstration of airplane inspections by drones at the 2018 DJI Airworks conference. It's a use case with tremendous potential return on investment, speeding up an expensive and time consuming process dramatically. Now that Donecle is ready to implement the service for the largest airline in South America, its safety and value will be proven on the tarmac – and will hopefully spread to airlines around the world. Having commercial drones safely implemented at airports could be a great move for commercial airlines and for the drone



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industry. *The following is from a Donecle press release.* <https://dronelife.com/2019/12/23/this-company-is-proving-drones-and-manned-aircraft-can-be-an-excellent-team/>

**Singapore tests UTM system** December 16, 2019 Jenny Beechener UAS traffic management news



Singapore has completed a second stage of flight trials for an Unmanned Air Traffic Management system, a two-year project focused on enabling safe and efficient Unmanned Aerial System delivery operations and Urban Air Mobility within Singapore's densely populated urban environment launched by the Civil Aviation Authority of Singapore. Flight test company Nova Systems, in collaboration with OneSky, is leading a consortium to isolate the mix of systems and technologies required to support the integration of drones in low-level airspace and safely coordinate their movement.

The trials included progressive flight testing from 0-1000 feet, testing of LTE connectivity in densely populated areas such as the Marina Bay Financial Centre where infrastructure introduces many urban canyon effects and maritime environments. The next round of flight trials will be held in 2020, with a review of the UTM prototype's functionality against an operational backdrop of multi-platform drones conducting a mix of VLOS and BVLOS operations. <https://www.unmannedairspace.info/latest-news-and-information/singapore-tests-utm-system/>

**Plextek Helps Heavy Lifting Autonomous Drones to Navigate In Complex Environments** December 21, 2019 News



Engineering and design consultancy Plextek is partnering with unmanned aerial systems specialist, Griff Aviation, to put micro radars and sensors on its heavy lifting drones. Griff is developing UAVs designed to carry payloads up to **250kg** for a wide range of applications including moving building equipment and materials across harsh terrains, mountainous and forested landscapes.

Operating in the 60 GHz mm-waveband, the e-scan radar is capable of detecting hazards such as power lines from 60 meters as well as buildings, bridges, vegetation and other objects both in front of and beneath the drone with range out to 300m and angular resolution. The 60GHz band is license exempt in most territories.



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Plextek is currently working with Griff Aviation on trials in Norway ahead of putting the drones through their paces with an energy provider in Japan and a power line company in Australia.

[https://uasweekly.com/2019/12/21/plextek-helps-heavy-lifting-autonomous-drones-to-navigate-in-complex-environments/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_daily\\_newsletter\\_12\\_23\\_2019&utm\\_term=2019-12-23](https://uasweekly.com/2019/12/21/plextek-helps-heavy-lifting-autonomous-drones-to-navigate-in-complex-environments/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_12_23_2019&utm_term=2019-12-23)

**24Dec19**

### **French component suppliers demo constellation hardware with ANGELS cubesat**

Caleb Henry December 23, 2019



WASHINGTON — A cubesat launched Dec. 18 is testing hardware from French component makers jockeying for smallsat constellation work.

ANGELS, the Argos Néo on a Generic Economical and Light Satellite, is a 12-unit cubesat built entirely with French components. The 25-kilogram spacecraft, financed by the French space agency CNES and French smallsat builder Hemeria, launched on an Arianespace Soyuz Dec. 18 with an Italian radar reconnaissance satellite and the European exoplanet-hunting telescope CHEOPS. ANGELS, one of three cubesats onboard the launch, carries a payload that collects low-power signals from maritime beacons.

French component suppliers are using ANGELS to **space-qualify new technology**. While several suppliers have already contributed to other satellite programs, ANGELS is the culmination of a collective push by 12 companies to export French components globally.

Five of the 12 companies in a group branded as the “NewSpace Factory” contributed to the ANGELS mission. <https://spacenews.com/french-component-suppliers-demo-constellation-hardware-with-angels-cubesat/>

### **Mysterious drones flying nighttime patterns over northeast Colorado leave local law enforcement stumped**

SHELLY BRADBURY sbradbury@denverpost.com The Denver Post  
December 23, 2019

A band of large drones appears to be flying nighttime search patterns over northeast Colorado — and local authorities say they don’t know who’s behind the mysterious aircraft.



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The drones, estimated to have **six-foot wingspans**, have been flying over Phillips and Yuma counties every night for about the last week, Phillips County Sheriff Thomas Elliott said Monday. The drones stay about 200 feet to 300 feet in the air and fly steadily in squares of about 25 miles, he said. There are at least 17 drones; they emerge each night around 7 p.m. and disappear around 10 p.m., he said. "They've been doing a grid search, a grid pattern. They fly one square and then they fly another square."

The sheriff's office can't explain where the drones are coming from or who is flying them. The estimated size and number of drones makes it unlikely that they're being flown by hobbyists. The Federal Aviation Administration told the sheriff's office that it had no information on the drones, and the U.S. Air Force said the aircraft aren't theirs, Elliott said.

<https://www.denverpost.com/2019/12/23/drones-mystery-colorado/>

### **Zipline drone responds, saves a 9-day-old baby in hours** Josh Spires Dec. 23rd 2019



[Zipline](#) has been saving lives for the last few years with its [long distance drones](#) delivering life-saving medical equipment and materials to hard-to-reach villages throughout Rwanda and Ghana. Today we are taking a look at an everyday flight one of Zipline's drones makes to save another life.

At 8:15 pm an emergency order is received, stating a 9-day-old baby is in critical condition and requires life-saving blood. 5 minutes later, at 8:20 pm the drone is ready and cleared for flight by [Rwanda](#) Airports. At 8:25 pm the drone takes off for its 65-mile journey to the baby in critical condition. 40 minutes later, the drone arrives at the location and is met by medical professionals waiting to save the baby's life. After the drone is launched, it then flies back to its starting point, waiting for its next flight mission.

[Zipline](#) has already made over 25,000 life-saving deliveries and will continue to do so into the next decade. The Zipline drones can carry 1.8kg per flight if more is needed, multiple drones are sent together. The drones have a service radius of around 50 miles and an average flight time of 30 minutes, which would have taken a truck 5 hours to get to the patient and back. A Mother from Rwanda stated, at first she thought using drones was a crazy idea until one of the drones saved her life. <https://dronedj.com/2019/12/23/zipline-drone-save-9-day-old-baby/>



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### NYC officials push for inspections by drone after fatal falling debris accident

Haye Kesteloo Dec. 24th 2019



Only days after Erica Tishman, a well-known architect, was killed by pieces of building facade that fell in midtown Manhattan, some New York City officials are now pushing for inspections by drone to prevent such accidents from happening in the future. Currently, [an outdated law](#) prohibits the use of drones in New

York City.

The proposed law would require inspections by drone to take place within 48 hours of a complaint or violation. The new legislation would also allow for the use of drones for building inspections by the city's housing authority. It aims to detect problems and possibly dangerous conditions. Tishman was walking along 49th Street last Tuesday when she was fatally struck by a piece of falling facade from a building that was fined in April.

According to city councilors Justin Brannan and Robert Cornegy, lawmakers must take action, because currently, drone flying is illegal in New York City outside of five dedicated areas. The councilors also pointed to the lack of manpower to adequately deal with the thousands of buildings that have violations or are in need of repair. <https://dronedj.com/2019/12/24/nyc-officials-inspections-by-drone/#more-22459>

### FAA Delays Remote ID NPRM, Again, and We Still Have Miles to Go

Danielle Gagne  
DECEMBER 23, 2019



On Friday, December 20<sup>th</sup> [Commercial UAV News](#) waited, along with everyone else in the space, for the highly anticipated official publication of the NPRM on Remote ID in the Federal Register. **It didn't come.** The date has been pushed out again toward the [end of December](#).

For [years now](#), Remote ID has been held up as the linchpin to opening up the sky for beyond visual line of sight operations and operations over people. Without some way to identify all aircraft in the national airspace these operations are not able to take place. Without knowing what is in the sky, what direction and speed it is going, and whether or not it is authorized, very little can follow. Remote ID is directly tied to the future of the sky that sees fully integrated UTM and UAM ecosystems.



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It can be easy to overlook that we're just at the **beginning** of a process to enable this level of drone operation in the enterprise. Remote ID is obviously critical, but there are still significant issues with standards of operation and safety, certifications, privacy, noise, and public acceptance that must be tackled before unmanned vehicles take over the skies, and this is no small undertaking. For instance, who has ultimate jurisdiction over the airspace? How will issues with federal preemption in the drone space be sorted out? What role will local/regional/state authorities take? [https://www.commercialuavnews.com/security/faa-delays-remote-id-nprm-again-and-we-still-have-miles-to-go?utm\\_source=marketo&utm\\_medium=email&utm\\_campaign=newsletter&utm\\_content=newsletter&mkt\\_tok=eyJpIjoiTVRlYXN5qTIRReClInQioiJndEJvTEQ2Y1wvK1A2NjllNTdIMnpUbHdFR2kzMFdSUZGHaVwvM3RxeU9MV1VGNW5EcVhybWlzTFJXc1RHZXIKRnhzOXVCVke5Z1hnODVwbkISSE5ZOVhXMm44UnpWT21US3hZVWtnck56NTBpR3hJbkRGellLRkF6QWxcL0xhQjJGbiJ9](https://www.commercialuavnews.com/security/faa-delays-remote-id-nprm-again-and-we-still-have-miles-to-go?utm_source=marketo&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter&mkt_tok=eyJpIjoiTVRlYXN5qTIRReClInQioiJndEJvTEQ2Y1wvK1A2NjllNTdIMnpUbHdFR2kzMFdSUZGHaVwvM3RxeU9MV1VGNW5EcVhybWlzTFJXc1RHZXIKRnhzOXVCVke5Z1hnODVwbkISSE5ZOVhXMm44UnpWT21US3hZVWtnck56NTBpR3hJbkRGellLRkF6QWxcL0xhQjJGbiJ9)

### **BREAKING NEWS: FAA Announces Proposal – Remote ID for Drones** Miriam McNabb December 26, 2019



After several delays, the FAA has announced the Notice of Proposed Rulemaking for Remote ID for drones.

Remote identification of drones, and connection of that identification with the operator of the drone, is considered a key component of an unmanned traffic management system and enforcing drone rules. The rule has been delayed several times, due to the numerous stakeholders involved in the process and the complexity of the issue.

The proposal has not yet been published to the Federal Register: however, you may review the unpublished version at [this link](#). The NPRM is scheduled to be published on **12/31/2019**. <https://dronelife.com/2019/12/26/breaking-news-faa-announces-proposal-remote-id-for-drones/>

**28Dec19**

### **Spotlight: One Zero Digital Media, a top drone business from California** Hays Kesteloo Dec. 27th 2019



Today in our [Spotlight Series](#) on *DroneDJ*, we feature Josh Friedman who turned [One Zero Digital Media](#) into a drone business back in 2012 with a DJI Phantom 2. Since then he has come a long way and has grown his company into one of the top providers of aerial photography and videography in the drone industry.





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In 2012, I was already running One Zero Digital Media and teaching video production at Golden West College. I was assisting a friend of mine on a music video shoot and he was using a DJI Phantom 1 with GoPro on it to capture aerial views. I fell in love with the idea and a few months later the original Phantom 2 was announced. I bought one of the first ones to enter the US and within a month I secured a job filming vineyards in Temecula from the ground and sky! I also took it into the classroom and realized that my students were just as excited about it as I was. Soon other educators were reaching out and I coordinated the first Drone Educators Conference. I have done three since, trained hundreds of students, and One Zero Digital Media is a top provider in the nation for aerial media services with drones.

What have been some of the most challenging drone missions you have undertaken so far?

Two stand out. In 2019 I led a team of three pilots and three VOs to Dallas, Texas to do a drone model inside and outside of AT&T Stadium. Second, earlier in the year I flew lanterns around a Grateful Dead Tribute Festival with two other pilots and four assistants. It was a 3 drone light show with three Inspire 2s. It was pretty amazing!! More of the interview at :

<https://dronedj.com/2019/12/27/spotlight-one-zero-digital-media-a-top-drone-business-from-california/#more-22534>

### **FAA Proposes Rule to Require Remote Identification of Drones** Kate O'Connor

December 26, 2019



The FAA issued a proposal on Thursday for a rule that would require unmanned aircraft systems to be identifiable remotely. The Notice of Proposed Rulemaking suggests tying remote identification requirements to UAS registration and would allow drone identification and location information to be received by “people on the ground and other airspace users.” According to the FAA, the proposed rule would cover all drones—both recreational and commercial—operating in U.S. airspace “with very few exceptions.”

While the FAA says the UAS remote identification equipment would provide information “similar to how ADS-B and transponders provide identifying information for manned aircraft,” the proposed rule would prohibit ADS-B Out and transponder use by drones due to concerns over “the lack of infrastructure for these technologies at lower altitudes and the potential saturation of [the] available radio frequency spectrum.” The rule would also require UAS owners who currently use a single registration number for multiple drones to register each one individually. The NPRM is scheduled to be officially published in the [Federal Register](#) on Dec. 31,

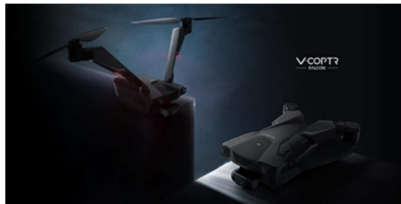


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after which it will be open for public comment for 60 days. [https://www.avweb.com/recent-updates/unmanned-vehicles/faa-proposes-rule-to-require-remote-identification-of-drones/?MailingID=255&utm\\_source=ActiveCampaign&utm\\_medium=email&utm\\_content=Boeing+Selling+MAX+Safety%2C+FAA+Proposes+Drone+Remote+Identification+Requirement&utm\\_campaign=Boeing+Selling+MAX+Safety%2C+FAA+Proposes+Drone+Remote+Identification+Requirement+-+Friday+December+27%2C+2019](https://www.avweb.com/recent-updates/unmanned-vehicles/faa-proposes-rule-to-require-remote-identification-of-drones/?MailingID=255&utm_source=ActiveCampaign&utm_medium=email&utm_content=Boeing+Selling+MAX+Safety%2C+FAA+Proposes+Drone+Remote+Identification+Requirement&utm_campaign=Boeing+Selling+MAX+Safety%2C+FAA+Proposes+Drone+Remote+Identification+Requirement+-+Friday+December+27%2C+2019)

29Dec19

### V-Coptr Falcon bi-copter has a flight time of 50 minutes [Josh Spires](#) Dec. 26th 2019



[Zero Zero Robotics](#) has publically released its latest product, the V-Coptr Falcon, a v-shaped bi-copter. The drone can achieve a flight time of **50 minutes** thanks to its two motors, which are attached via tilting arms. It also has a 4K 3-axis stabilized camera, [obstacle avoidance](#), and a 7km transmission

distance.

The drone comes with low noise propellers that are attached to the drone via tilting arms, keeping the drone stable and allowing it to fly the intended direction. The V-Coptr Falcon has a 1/2.3inch 12MP CMOS sensor capable of 4K video stabilized by a 3-axis gimbal.

The V-Coptr Falcon has front-facing obstacle avoidance and is capable of tracking objects, similar to [DJI's ActiveTrack](#). The V-Coptr is can also take cinematic shots with its built-in flight modes.

The drone weighs 730 grams with a 4500mAh battery giving it its 50 minute flight time, while the controller has a 2.5 hour flight time. The V-Coptr takes JPEG and RAW photos at 12MP while it is able to take video in 4K @ 30 fps, 2.7K @ 60 fps, 1080p @ 120 fps and 720p @ 120 fps. You can view the full specs on Zero Zero Robotics' [website](#).

<https://dronedj.com/2019/12/26/v-coptr-falcon-flight-time-50-minutes/#more-22484>

### The Pentagon Wants AI-Driven Drone Swarms for Search and Rescue Ops AARON BOYD DECEMBER 26, 2019



The Pentagon's Joint Artificial Intelligence Center, or JAIC, issued [a request for information](#) to find out if AI developers and drone swarm builders can come together to support



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search and rescue missions.

The goal for the RFI is to discover whether industry can deliver a full-stack search and rescue drone swarm that can self-pilot, detect humans and other targets and stream data and video back to a central location. The potential solicitation would also look for companies or teams that can provide algorithms, machine training processes and data to supplement that provided by the government.

The ideal result would be a contract with several vendors “that together could provide the capability to fly to a predetermined location/area, find people and manmade objects—through onboard edge processing—and cue analysts to look at detections sent via a datalink to a control station,” according to the RFI. “Sensors shall be able to stream full motion video to an analyst station during the day or night; though, the system will not normally be streaming as the AI will be monitoring the imagery instead of a person.”

The system has to have enough edge processing power to enable the AI to fly, detect and monitor without any human intervention, while also being able to stream live video to an operator and allow that human to take control of the drones, if needed.

<https://www.nextgov.com/emerging-tech/2019/12/pentagon-wants-ai-driven-drone-swarms-search-and-rescue-ops/162113/>

### As Australia Burns, A Danish Startup Steps Up Its Autonomous Drone

**Programme** Heather Farmbrough Green Tech Dec 21, 2019



*Smoke haze over Iron Cove Bridge*

The forest fires which have been burning in New South Wales since October have left a pall of smoke hanging over Sydney. [A state of emergency](#) has been declared for seven days where record-breaking temperatures and strong winds are continuing to fuel the fires. Across Australia, [forest fires are threatening areas around every major city in the country](#).

Robotto is developing an autonomous drone in collaboration with the [Danish Emergency Management Agency](#) which uses artificial intelligence to provide a faster and more accurate way to measure fires.



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Using a handheld tablet, the operator will be able to decide where to send the drone, and to alter the angle of the camera to create a slightly different picture. If the drone finds a fire, it can gather data and transmit it back immediately via 5G.



With a fixed wing, Robotto's drone flies like a small plane up above the forest at 2 – 2.5 kilometres high, considerably higher than many manually operated commercial drones. Another advantage is that the battery allows the drone to fly for up to **two and a half hours**.

The drones will be ready for the European summer in 2020. Users will take out a subscription and can call up at short notice if they need a drone, which will be flown straight out to them. The cost of using the drone for the week will be €100,000.

[https://www.forbes.com/sites/heatherfarmbrough/2019/12/21/as-australia-burns-a-danish-startup-steps-up-its-autonomous-drone-programme/?utm\\_source=Airborne%2BInternational%2BResponse%2BTeam%2B\(AIRT\)%2BNews%2BList&utm\\_campaign=88edb075fa-EMAIL\\_CAMPAIGN\\_2019\\_12\\_29\\_01\\_42&utm\\_medium=email&utm\\_term=0\\_2ecada6f57-88edb075fa-33089729#7ada82e857e5](https://www.forbes.com/sites/heatherfarmbrough/2019/12/21/as-australia-burns-a-danish-startup-steps-up-its-autonomous-drone-programme/?utm_source=Airborne%2BInternational%2BResponse%2BTeam%2B(AIRT)%2BNews%2BList&utm_campaign=88edb075fa-EMAIL_CAMPAIGN_2019_12_29_01_42&utm_medium=email&utm_term=0_2ecada6f57-88edb075fa-33089729#7ada82e857e5)

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### **AirVuz Drone Video, 12 Days: Five Golden Rings** Harry McNabb December 30, 2019

Yes, we're stretching here... When you think of golden rings, what is one of the most famous gold rings of them all? Check out this video created by FreD and located on [Airvuz](#).

*Contributor FreD used a drone to give us an aerial view of one of the most famous spots in New Zealand. Matamata is a small town in the state of Waikato on the country's North Island. Matamata achieved world reknown as the closest town to a primary shooting location known as Hobbiton in the Lord of the Rings and later the Hobbit movie series. The area was "discovered" in the late 1990's via an aerial search during the pre-production phase of the Lord of the Rings series, one of the most lucrative franchises in cinematic history.*

<https://dronelife.com/2019/12/30/airvuz-drone-video-12-days-five-golden-rings/>

### **Military-grade drone will fly over San Diego next year** KATY STEGALL DEC. 26, 2019



Defense contractor General Atomics Aeronautical Systems, Inc., in partnership with NASA, developed SkyGuardian

! Innovation | Charlottesville and Portsmouth, VA  
[.us](#) | 757-309-5869 | [www.axcelinnovation.com](http://www.axcelinnovation.com)



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drones, which it says are improved versions of the Predator, its military drones.

People involved in the demonstration next year say the SkyGuardian — a drone with a 79-foot wingspan and surveillance capabilities of over 2,000 feet— will be used for “mapping of critical infrastructure” in the San Diego region. The path and location of the flights were not disclosed.

General Atomics’ goal is to integrate SkyGuardian drones into American skies in a variety of ways in coming years. A test flight in San Diego will figure prominently in demonstrating the drones’ civilian capabilities including broader support for first responders contending with natural disasters such as floods and forest fires.

Some city officials and tech experts say they were not aware of the initiative.

<https://www.sandiegouniontribune.com/news/watchdog/story/2019-12-26/city-council-and-public-were-unaware-of-military-grade-drone-test-flight>

## Pyka and its autonomous, electric crop-spraying drone land \$11M seed round

Devin Coldewey@techcrunch December 24, 2019



[Pyka’s](#) approach is unlike that of many in the drone industry, which has tended to use multirotor craft for their maneuverability and easy take-off and landing. But those drones can’t carry the weight and volume of pesticides and other chemicals that need to be deployed at large scales.

The craft Pyka has built is more traditional, resembling a traditional one-seater crop dusting plane but lacking the cockpit. It’s driven by a trio of propellers, and most of the interior is given over to payload (it can carry about 450 pounds) and batteries. Of course, there is also a sensing suite and onboard computer to handle the immediate demands of automated

flight.

Pyka can take off or land on a 150-foot stretch of flat land and can spray about a hundred acres per hour, about the same as a helicopter. But the autonomous craft provides improved precision (it flies lower) and safety (no human pulling difficult maneuvers every minute or two).



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Perhaps more importantly, the feds don't mind it. Pyka claims to be the **only company** in the world with a **commercially approved** large autonomous electric aircraft. Small ones like drones have been approved left and right, but the Egret is approaching the size of a traditional "small aircraft," like a Piper Cub. <https://techcrunch.com/2019/12/24/pyka-and-its-autonomous-electric-crop-spraying-drone-land-11m-seed-round/>

### **China's Super Farms May Help Major Drone Maker Double Sales** Bloomberg News December 23, 2019



XAG forecasts domestic sales volumes to rise to **50,000 drones in 2020** from about 25,000 this year, Justin Gong, co-founder of the Guangzhou-based company, said in an interview in Beijing. The drones are used for seeding, fertilizing and spraying pesticides.

"More farmers are transforming their small plot of land into large farms," said Gong. "That makes drones more popular."

China's political leaders are encouraging smaller farmers, which make up the majority of the rural landscape, to consolidate and become part of large-sized collective farms in a bid to improve efficiency in food production. <https://www.bloomberg.com/news/articles/2019-12-23/china-s-super-farms-may-help-major-drone-maker-double-sales>

### **Drone-Testing Site Lifts Central New York's Aerospace Industry** Jimmy Vielkind Dec. 26, 2019



*Nuair Chief Operations Officer Tony Basile looks over GPS data from the airport's air space.*

ROME, N.Y.—Griffiss International Airport is one of seven sites across the country designated by the Federal Aviation Administration for testing unmanned aerial systems, and local officials say the aircraft are helping rejuvenate an aerospace sector that once flourished in Central New York.

More than 2,600 test flights have taken off from the Griffiss tarmac since 2014 including everything from smaller drones designed to pollinate crops to a four-seat, twin-engine aircraft that operated without a pilot. Nuair's team is helping develop technology that will let drones automatically detect and avoid other aircraft, as well as systems that will remotely identify them to law enforcement and air-traffic controllers.





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Nuair expects testing to accelerate in 2020. The organization recently completed work on a 50-mile test corridor that stretches between Griffiss and the city of Syracuse, allowing for longer flights. Officials hope to fly a 500-pound drone across the entire airspace later in the spring. Data from these flights will help the FAA develop a traffic-management system and loosen the strict regulations currently in place for commercial uses of unmanned aerial systems.

<https://www.wsj.com/articles/drone-testing-site-lifts-central-new-yorks-aerospace-industry-11577372401>

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### **Wing Aviation Looks Back at a Successful 2019 – and Forward to Drone Delivery around the Globe** Miriam McNabb December 31, 2019



Drone delivery has been one of the biggest stories of 2019, with major firsts from the FAA and drone service providers. From becoming the first certified drone air carrier to medical drone deliveries and the IPP, Google spin-off Wing was a major player. Here, Wing reflects back on what happened last year: showing the way for more significant progress in 2020.

In April, Wing became the [first drone operator](#) to be certified as an air carrier by the Federal Aviation Administration. With its expanded Air Carrier certificate, Wing's permissions are the **first** to allow multiple pilots to oversee multiple unmanned aircraft making commercial deliveries simultaneously to the general public. This paved the way for [Wing to conduct the most advanced drone delivery trial in the US](#) — delivering packages, over-the-counter medication, snacks and gifts to residents of **Christiansburg, Virginia**.

In [partnership with FedEx Express, Walgreens](#), and Sugar Magnolia, a much-beloved local business, we're improving access to health care products, creating new avenues of growth for local businesses, and exploring ways to enhance the efficiency of last-mile delivery service. <https://dronelife.com/2019/12/31/wing-aviation-looks-back-at-a-successful-2019-and-forward-to-drone-delivery-around-the-globe/>



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