



## UAS and SmallSat Weekly News

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### FAA Announces Real-Time Airspace Authorizations at 500 Airports, Starting April 30

30 Miriam McNabbon: March 07, 2018

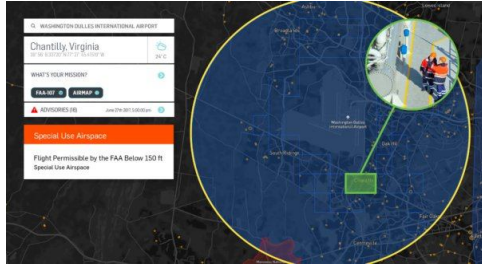


image: AirMap

The FAA announced yesterday that the [Low Altitude Authorization and Notification Capability](#) (LAANC), which provides real-time airspace authorizations, will be expanded to 500 airports beginning April 30. The FAA's Acting Administrator Dan Elwell made the announcement on the first day of the UAS Symposium in

Baltimore.

“Under the FAA’s Part 107 small drone rule, operators must secure approval from the agency to operate in any airspace controlled by an air traffic facility. To facilitate those approvals, the agency deployed the prototype [Low Altitude Authorization and Notification Capability](#) (LAANC) at several air traffic facilities last November to evaluate the feasibility of a **fully automated solution** enabled by data sharing. Based on the prototype’s success, the agency will now conduct a nationwide beta test beginning April 30 that will deploy LAANC incrementally at nearly 300 air traffic facilities covering approximately 500 airports. The final deployment will begin on September 13,” says the FAA announcement. <https://dronelife.com/2018/03/07/faa-announces-real-time-airspace-authorizations-500-airports-starting-april-30/>

### FAA Symposium: Drones Seeing “Massive Adoption,” Safety Concerns are a Primary Issue

Miriam McNabbon: March 07, 2018



Michael Kratsios, deputy assistant to the president and deputy U.S. technology officer, said that the administration offered their **full support for drone integration**. Saying that he expected the 75,000 commercial drone registrations to grow “fivefold” over the next five years, Kratsios

commented: “We’ve never seen such a massive adoption of new vehicles taking to the sky at such a rapid pace.”

FAA Acting Administrator Dan Elwell said that the next 12 -18 months would be a critical period in drone integration as the agency [expands the LAANC program](#) and works towards regulation



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on BVLOS (beyond visual line of sight) flight. [AUVSI reports](#) that Elwell said not only that ID and tracking was important, but that all drones would need to be included: "If you want to fly in the system, you have to be identifiable, and you have to follow the rules," he said, which will need to apply to hobbyist aircraft as well, because "one malicious act could put a hard stop on all the hard work we've done on drone integration."

AUVSI says that other officials agree. "Angela Stubblefield, the deputy associate administrator for the FAA, said tracking and identifying drone is a key factor for airspace integration, **as the agency deals with 'the clueless, the careless and the criminals.'**"

<https://dronelife.com/2018/03/07/faa-symposium-drones-seeing-massive-adoption-safety-concerns-primary-issue/>

### **U.S. space companies aim to help Brazil rocket base lift off** [Anthony Boadle](#)

BRASILIA (Reuters) - U.S. companies eager to tap into the fast-growing market for low-cost satellite launches could become the first customers when Brazil's Alcantara space center near the equator opens as a commercial spaceport, executives and Brazilian officials said.

Aerospace titans Boeing Co and Lockheed Martin Corp in December visited the Alcantara space center, but the Brazilian space agency's launch site is especially attractive to smaller firms because its equatorial location **cuts fuel costs by a third**.

Tucson, Arizona-based Vector Launch Inc, which specializes in small rockets, appears eager to launch from the Brazilian site. The company wants to undercut big payload specialists like billionaire entrepreneur Elon Musk's SpaceX by **launching microsattellites from small rockets**, cutting costs and wait time for clients. "Our vision is to launch hundreds of Vector rockets into orbit to satisfy the growing market for microsattellites," said Vector Vice President Alex Rodriguez, who made a December visit to Alcantara coordinated by Boeing.

<https://www.reuters.com/article/us-brazil-space/u-s-space-companies-aim-to-help-brazil-rocket-base-lift-off-idUSKCN1GK0J1>

### **Switzerland first to test integrating drones into its air traffic control** ERIC TEGLER - 3/9/2018



Switzerland is on the cusp of becoming the first country to formally integrate drones into the air traffic management system that controls its airspace. The limited integration is the first to be launched under a broader European initiative called U-space, which seeks to create a digital infrastructure that would allow millions of small drones to safely operate beyond line-of-sight in approved airspace.



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Starting in June, Swiss air traffic control operator Skyguide will begin merging its own data and traffic management applications with a software platform developed by Santa Monica, California-based AirMap Inc. The software is called AirMap, which is a digital airspace-mapping platform.

AirMap interacts with small unmanned aerial vehicles through an Internet application interface that's also used by drone manufacturers like DJI, 3D Robotics, Yuneec, and other commercial and military small UAV manufacturers. For the Swiss U-space application, AirMap will have two main components.

The first is a digital registry of drones and their operators, akin to the FAA aircraft registration system. The second is a data sharing and digital communication conduit that allows drone operators to quickly request air traffic control authorization to fly in a specific area and to receive notification of airspace areas that are geo-fenced and therefore off limits to small drones.

Drone pilots are immediately notified via real-time traffic alerts by an AirMap app when they cross a geo-fence area. Alerts show up as text messages or graphic cues on the tablets or smartphones that UAV pilots typically use to control small drones. Alerting drone pilots to flight restrictions, and providing air traffic managers with a basic awareness of who is flying a drone and where can now be done in seconds. <https://arstechnica.com/cars/2018/03/first-test-of-drone-air-traffic-control-to-happen-in-switzerland-this-year/>

## Amazon, Google, Others Are Developing Private Air-Traffic Control for Drones

Andy Pasztor March 9, 2018



BALTIMORE—The commercial drone industry wants to create **a privately funded and operated air-traffic control network, separate from the current federal system**, to enable widespread operations at low altitudes.

In conjunction with the National Aeronautics and Space Administration, validation tests are slated over the next three months at a handful of sites. The intent is to develop a “totally different, new way of doing things. Limited deployment will take at least two years. But even partial success in the early stages would provide the foundation for **an entirely new airspace-management model**.

The FAA wouldn't finance or run the anticipated system for drones but would retain some authority, for example, to temporarily bar drones from certain areas if police or medical-evacuation helicopters planned to pass through them.



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The pace and scope of such advances are “really not an FAA decision,” according to Jay Merkle, a senior FAA program manager. Any new approach to air-traffic control is a decision for the entire drone community, he told the conference, and success “depend on how well the industry will come together.”

[https://www.wsj.com/articles/amazon-google-others-are-developing-private-air-traffic-control-for-drones-1520622925?mod=ITP\\_businessandfinance\\_1&tesla=y](https://www.wsj.com/articles/amazon-google-others-are-developing-private-air-traffic-control-for-drones-1520622925?mod=ITP_businessandfinance_1&tesla=y)

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### Google is Helping the Defense Department Develop Drone Strike

**Technology** March 11, 2018 Feilidh Dwyer



Google have been secretly lending their expertise to a controversial venture – helping the United States Defense Department develop algorithms for drone surveillance technology.

This story, originally published by [Gizmodo last week](#), revealed that Google had been contributing to Project Maven with a mission to “accelerate DoD’s integration of big data and machine

learning.”

When military drones (and the military has 1100 of them) carry out sweeps over large land masses such as Iraq and Syria, they often collect millions of hours of footage. With current technology, the process of going through the data and finding out what’s worth paying attention to is an enormous task. Google’s machine-learning helps with that.

Their algorithms assist the DoD with classifying 38 classes of objects into categories such as cars, houses or humans and will flag items of interest for intelligence analysts to review. This technology is currently intended to assist in “non-offensive” capacities only.

<https://www.wetalkuav.com/google-to-help-defense-department-develop-drone-strike-technology/>



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**Free as a Bird** The Economist Print edition | Science and technology Mar 8th 2018

Passenger drones are a better kind of flying car. *Could the dream of soaring above the traffic come true?*



Flying cars have never taken off. That is not because they are impossible to build, but because they are, fundamentally, a compromise, neither good on the road nor graceful in the sky. Most designs require a runway to take off and land, and a pilot's license to operate. But that is changing. Developments in electric power, batteries and autonomous-flight systems have led to **a boom in sales of small drone aircraft**. Several entrepreneurs have had the idea of scaling up such machines to the point that people can fit inside them. The ultimate goal is a pilotless passenger drone that can either be parked outside your house like an ordinary car, or even summoned with a smartphone app, like a taxi.

Dozens of firms are trying to build such machines. They include Workhorse, an American maker of electric vehicles; Joby Aviation, a Californian company whose backers include JetBlue Airways and Toyota; AeroMobil, a Slovakian company; and Lillium, a German firm working on an air taxi that uses jet-type electric thrusters. Some of their products are convincing enough to have attracted powerful backing. Lillium's investors include Tencent, a giant Chinese investment firm. Larry Page, one of the co-founders of Google, has put his money into several such projects, including the Kitty Hawk Flyer, which the rider sits astride much like a flying motorcycle. Not to be left out, aircraft makers such as Boeing, Airbus and Bell Helicopter have also shown off in-house designs of their own.

At least at first, passenger drones will cost supercar money: mooted prices tend to be around \$200,000-300,000. That, combined with the requirement to have at least some form of pilot's license, will limit demand, at least at first. But as with all technology, if the machines prove popular, their **prices will fall**, especially once autonomous operations are routine. These new machines may not look like the flying cars that Henry Ford imagined, but he was right. Their time may, at last, have come. <https://www.economist.com/news/science-and-technology/21738353-could-dream-soaring-above-traffic-come-true-passenger-drones-are>



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### **Maryland UAS Experts Join Humanitarian Effort to Rebuild a Devastated Dominica** March 12, 2018 News

Almost 150 days after the winds of Hurricane Maria dissipated, officials for the island nation of Dominica received a final set of aerial maps that will guide what promises to be a multiyear recovery effort. Gathered by a team from the [University of Maryland](#) (UMD), [Trinity UAS](#), and the Canadian nonprofit [GlobalMedic](#), the information will also be made available to the United Nations and other global humanitarian groups.

Around 80 percent of Dominicans were directly affected by Maria's punishing winds and rain in September 2017. Fields of crops were destroyed, power and water systems were knocked out, and more than 90 percent of home and building roofs were damaged. The World Bank estimates losses at \$1.3 billion, or 224 percent of the country's GDP.

Using cameras mounted on an unmanned aerial vehicle, **the team mapped 5,683 acres in two weeks**. Henderson and the other pilots flew beyond line of sight, over water, and over people thanks to permissions from Dominican authorities. This fantastic collaboration between an NGO, an academic institution, and a private company is a clear example of the great humanitarian work that can be done when we all work together."

"The lessons UMD and Trinity UAS learned in extreme environments like Dominica will certainly benefit the design and capabilities of future generations of drones," added Strand. [http://uasweekly.com/2018/03/12/maryland-uas-experts-join-humanitarian-effort-rebuild-devastated-dominica/?utm\\_medium=push\\_notification&utm\\_source=rss&utm\\_campaign=rss\\_pushcrew](http://uasweekly.com/2018/03/12/maryland-uas-experts-join-humanitarian-effort-rebuild-devastated-dominica/?utm_medium=push_notification&utm_source=rss&utm_campaign=rss_pushcrew)

### **Serbia's First HAPS, New UAVs, Unveiled By Composite Technology Team At SEAS** March 12, 2018 News

The second Southeast Europe Aviation Summit (SEAS), held in Belgrade, Serbia, on 8 and 9 March, saw the unveiling of three new innovative unmanned aerial vehicles (UAVs) currently under development by Belgrade-based Composite Technology Team (CTT).

Chief among these was **a high-altitude pseudo satellite** (HAPS) named Pupin after the Serbian-American scientist Mihajlo Pupin. A solar-powered UAV designed to fly at altitudes of 20,000 m, Pupin is intended to **stay airborne for months** while carrying various payloads, such as telecommunications equipment and surveillance sensors.



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"We are one of only five companies worldwide that are currently working on developing HAPS and we hope that very soon we will begin testing our system in order to prove the concept and proceed with the follow-on development of Pupin for executing a wide variety of military and civilian missions," Petar Matunovic, CTT aerospace engineer and CEO told Jane's at SEAS.



Presented in model form at SEAS, the NT155 is a medium-altitude long-endurance (MALE) UAV with **an airframe made entirely from advanced composites**. This allows a complex aerodynamic shape and light weight while offering the structural strength required to facilitate wing-mounted hardpoints for weapons, electro-optical payloads, or auxiliary fuel tanks. The system is still in the design phase but is expected to have a maximum take-off weight (MTOW) of 1,000 kg, a cruising speed of 140 km/h, and an **operational endurance of at least 16 hours**. [http://uasweekly.com/2018/03/12/serbias-first-haps-new-uavs-unveiled-composite-technology-team-seas/?utm\\_medium=push\\_notification&utm\\_source=rss&utm\\_campaign=rss\\_pushcrew](http://uasweekly.com/2018/03/12/serbias-first-haps-new-uavs-unveiled-composite-technology-team-seas/?utm_medium=push_notification&utm_source=rss&utm_campaign=rss_pushcrew)

### Coming Soon to a Front Porch Near You: Package Delivery Via Drone *Andy Pasztor*

March 11, 2018



After lagging behind other countries for years, commercial drones in the U.S. are expected to begin limited package deliveries **within months**, according to federal regulators and industry officials.

Earlier promises of progress turned out to be premature. The green light could be delayed again if proponents can't overcome [nagging security concerns](#) on the part of local or national law-enforcement agencies.

But some proponents of delivery and other drone applications "think they might be ready to operate this summer," Jay Merkle, a senior FAA air-traffic control official, said during a break at an unmanned-aircraft conference in Baltimore last week that highlighted the agency's pro-business approach.

At least 10 [FAA-approved pilot programs](#) for various drone initiatives—some likely including package delivery—are slated to start by May. Separately, industry and government officials have indicated that Amazon, widely considered one the most aggressive and [furthest advanced](#) applicants, is pushing for safety approval of detailed drone designs, as well as precise





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operating rules. <https://www.wsj.com/articles/coming-soon-to-a-front-porch-near-you-package-delivery-via-drone-1520798822>

### Transportation Secretary Elaine Chao Addresses UAS Symposium, Asks Industry to Step Up

Miriam McNabbon: March 09, 2018



U.S. Secretary of Transportation Elaine Chao addressed the audience at the FAA's UAS Symposium yesterday. Chao told attendees that **operations over people, night flight, and flight beyond visual line of sight (BVLOS) were on the way**. While stakeholders are concerned about safety, Chao said that "this administration is actively working through these issues."

Chao also said that the FAA's UAS Pilot Program, which would allow state, local and tribal governments to request waivers for drone programs in their communities and provide the FAA with feedback that may inform regulations, had generated an **"extremely gratifying" response** from stakeholders. The agency received 149 applications from a diverse group of stakeholders, and was "on track" to announce the first 10 participants in May.

The Secretary finished, however, with a warning. "It's no secret...that the public has legitimate concerns," said Chao, asking the drone industry to "step up" in helping to educate the public and address their concerns over safety and privacy.

<https://dronelife.com/2018/03/09/transportation-secretary-elaine-chao-addresses-uas-symposium-asks-industry-step/>

### First delivery

The first ever public drone parcel delivery service in Singapore will begin later this year. BILL READ FRAeS reports on how the new service will operate and its significance.

During the 2018 Singapore Air Show in February, Airbus invited the media to witness the **first demonstration** of a new parcel-delivery drone service which **will begin trial commercial operations later this year**. First started in 2016, the new project is the creation of four partners: Airbus - which built the drone, the National University of Singapore (NUS) - where the drone is being tested, the Singapore postal service, Singapore Post - which is the local logistics partner for the trial and the Civil Aviation Authority of Singapore (CAAS) - which is looking at the safety and operation aspects of the service with a view to its wider adoption. The project also has the support of the Singapore government.



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The drone being used for the project is the battery-powered Airbus Skyways octo-copter designed to carry parcels inside its chassis. The drones can either be flown manually or autonomously. “When we demonstrated the system at the air show in February, we flew the drone using a remote pilot” says Jeoh. “However, we eventually plan to use an autonomous autopilot system which will use our precision landing system.

### Parcel stations



The ground investment has included the construction of three parcel stations towers at different location around the NUS campus. One of these also includes an adjacent maintenance facility where drones are stored, recharged and serviced.



Once the drone has landed it is pushed into position over the hatchway by two sets of horizontal sliders.

Each parcel station has a flat roof landing pad on which the drone can land. On the side of the base of the tower are 24 lockers into which packages are posted and delivered. When a package is ready to be delivered, a drone flies to a parcel station and lands on the roof. Two sets of horizontal sliders then push the drone into position above a sliding hatchway. Once the drone is in position, the hatchway opens up beneath it and a panel opens in the base of the drone. Inside the tower, an automatic robotic arm collects the parcel from its box and lifts it up through the hatchway. <https://www.aerosociety.com/news/first-delivery/>

## Photographer Captures Halos Above Rock Pinnacles Using Drones MAR 06, 2018 MICHAEL ZHANG



Photographer [Reuben Wu](#) is a pioneer of [using LEDs mounted to drones to light landscapes](#) at night, and [his project Lux Noctis](#) is filled with gorgeous and unusual photos created using this



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technique. More recently, Wu has added yet another creative touch: he adds halos above the rock pinnacles on dramatic landscapes by flying the drones in circles during long-exposure photos.

"In some of these images, I've evolved my process of intervention where I show the light source in the form of a light path," Wu [writes](#). "I see it as a kind of 'zero trace' version of land art where the environment remains untouched by the artist and at the same time is presented in a way which is inspired by 19th-century sublime Romantic painting and science and fictional imagery." <https://petapixel.com/2018/03/06/photographer-gives-mountains-halos-using-drones-long-exposures/>

**13Mar18**

### **Larry Page's Flying Taxis, Now Exiting Stealth Mode** Andrew Ross Sorkin

DEALBOOK MARCH 12, 2018. SPACEX, VIA REUTERS

The company Kitty Hawk has been testing a new kind of fully electric, self-piloting flying taxi. It takes off like a helicopter and flies like a plane.

Since October, a mysterious flying object has been seen moving through the skies over the South Island of New Zealand. It looks like a cross between a small plane and a drone, with a series of small rotor blades along each wing that allow it to take off like a helicopter and then fly like a plane. To those on the ground, it has always been unclear whether there was a pilot aboard.



The airborne vehicle has been part of a series of "stealth" test flights by a company personally financed by Larry Page, the co-founder of Google and now the chief executive of Google's parent, Alphabet.

The company, known as Kitty Hawk and run by Sebastian Thrun, who helped start Google's autonomous car unit as the director of Google X, has been testing a new kind of fully electric, self-piloting flying taxi. On Tuesday, Mr. Page's company and the prime minister of New Zealand, [Jacinda Ardern](#), will announce they have reached an agreement to test Kitty Hawk's autonomous planes as part of an official certification process. The hope is that it will lead to **a commercial network of flying taxis** in New Zealand in as soon as **three years**. <https://www.nytimes.com/2018/03/12/business/dealbook/flying-taxis-larry-page.html>



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### FAA's Elwell Speaks on Drone Progress: We Can Do This, But Not Without Your Help

Betsy Lillian March 12, 2018



During his [speech](#) at last week's UAS Symposium in Baltimore, the Federal Aviation Administration's (FAA) acting administrator, Dan Elwell, underscored the agency's continued desire to work collaboratively with the industry to move drone integration forward.

He highlighted several collaborative initiatives the FAA has undertaken in recent times. For example, the Low Altitude Authorization and Notification Capability (LAANC), a prototype program for speedier processing of airspace authorization requests for drone operators, will soon be rolled out at nearly 300 air traffic facilities for its nationwide beta release.

Regarding other near-future priorities for the FAA, Elwell noted that the agency is "moving very quickly" to adopt requirements for [remote identification](#) of drones; revisiting "provisions [excepting model aircraft](#) in the FAA Modernization Act of 2012 from any regulation"; and "look[ing] forward" to Congress' finishing its long-term FAA reauthorization bill so that the agency can "have the appropriate tools to continue [its] work advancing safe drone integration."

Elwell also noted that the FAA, the DOT and the White House are "all on the same page" when it comes to furthering UAS integration while focusing on "security and privacy issues."

<https://unmanned-aerial.com/faas-elwell-speaks-on-drone-progress-we-can-do-this-but-not-without-your-help>

### Researchers Successfully Fly Triple Hybrid Hydrogen-powered UAS In Sydney



In a world first, a team of researchers from Sydney have successfully powered an unmanned aircraft flight with a triple hybrid propulsion system featuring one of the cleanest energies on Earth – hydrogen.

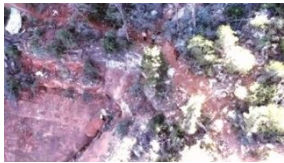
Led by University of Sydney aerospace engineering PhD candidate [Andrew Gong](#), the team of researchers – including [Dr Dries Verstraete](#) from the University's [School of Aerospace, Mechanical and Mechatronic Engineering \(AMME\)](#), Dr Jennifer Palmer from Defence Science and Technology Group, and support from Northrop Grumman Australia – successfully piloted test flights late last month using **a hydrogen fuel cell/battery/supercapacitor triple hybrid propulsion system.**



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“Hydrogen power provides much greater range and endurance compared to existing small electric unmanned aircraft. In the future, this may be useful for extended-duration inspection or surveillance tasks, such as surveying large agricultural properties or inspecting pipelines and other infrastructure,” Mr Gong said. “Hydrogen fuel cells are also more environmentally friendly because they produce zero CO<sub>2</sub> emissions and are much quieter than other fossil-fuelled aircraft.” <http://uasweekly.com/2018/03/13/researchers-successfully-fly-triple-hybrid-hydrogen-powered-uas-in-sydney/>

### **Sedona Fire District uses drone to rescue injured bicyclist** RON ELAND MARCH 12TH, 2018



Thanks to an eye in the sky, the Sedona Fire District was able to locate an injured mountain biker faster than normal.

On Saturday, March 3, crews responded to a trail near Courthouse Vista off State Route 179 around 1 p.m. They received a report of a mountain biker — who was visiting for the Mountain Bike Festival — who crashed and fell 35 feet down a steep rock face, SFD Fire Marshal Jon Davis said. The biker was left unconscious as a result of the fall, but someone riding with him called 911.

Battalion Chief Dave Cochrane arrived on the scene and chose to deploy the district’s second and newest drone. “All they had to go on was the general vicinity,” Davis said. “Within two minutes the drone was set up. They found the trail and followed it until they found the mountain biker. They estimated **it took about eight minutes** before they were able to pinpoint his location.

Because of the steep terrain, additional crews were called in to perform a high angle rescue. When crews arrived at the mountain biker’s location, Davis said they could not get a good visual on him. So, Cochrane used the drone and its video capabilities to **find the safest route** to the injured man. It took about three hours before crews were able to bring the man to the trailhead. He was then transported by ambulance to the hospital.

<http://www.redrocknews.com/news/88888896-city-news/74753-sfd-uses-drone-to-rescue-injured-bicyclist>



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**FCC calls out startup for launching tiny rogue satellites** Marguerite Reardon March 13, 2018

*A Silicon Valley startup reportedly launched four small satellites in January after the FCC denied its application over safety concerns.*



US regulators have accused a small Silicon Valley startup of launching satellites without permission.

In December, the Federal Communications Commission **denied** Swarm Technologies, a stealthy startup headed by a former Google employee, permission to launch four of its tiny satellites. But the company apparently launched them anyway, according to a report from tech news site [IEEE Spectrum](#). If confirmed, it would be the first time a company has done so without FCC approval.

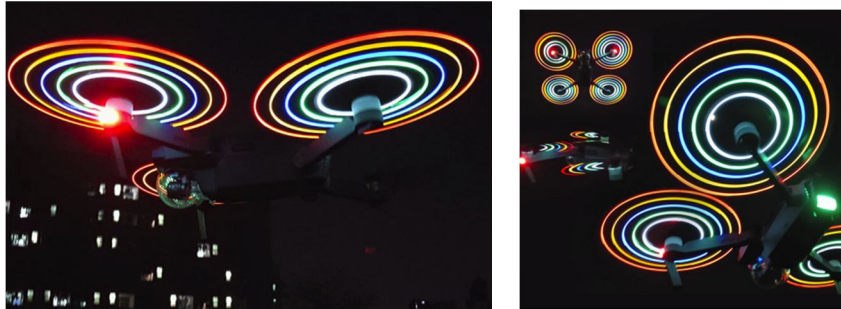
The agency denied the application for launching the satellites because of safety concerns, the [FCC said in its letter](#). The satellites, which measure less than 4 inches on one side, are too small to be detected by the US Space Surveillance Network, which keeps track of all man-made objects orbiting the Earth. Without the ability to track the satellites, they could hit other spacecraft in orbit and cause significant damage, the agency said.

The company says it can slash the cost of enabling satellite communications for billions of connected devices. The idea is to build a worldwide network that can be used to track ships and cars, as well as enable new agricultural technologies, and provide low-cost internet access for humanitarian efforts in hard-to-reach parts of the world. The four SpaceBees were supposed to be the first demonstration of Swarm's prototype hardware, according to the IEEE Spectrum article on Friday. <https://www.cnet.com/google-amp/news/fcc-calls-out-startup-for-launching-tiny-rogue-satellites/>



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**DJI Mavic Pro can light up the sky with these LED propellers** March 12, 2018 Thomas Luna



A company called [ledpropeller](#) is now offering LED flash propellers for DJI drones. Each propeller has a battery and a strip of LED lights to [illuminate the sky](#) with red, yellow, blue, green and white colors. Besides increasing a drone's visibility, the lights can be used to create long-exposure photographs.

According to Captain Drone's test review, a stock DJI Mavic Pro propeller weighs 7 grams, while an LED propeller with a CR3032 button battery installed weighs 15 grams. Using all four LED propellers means a Mavic will fly with an additional 32 grams. The battery life is rated for more than 300 minutes, so the LED propellers can be used for 12 25-minute flights.

[https://www.wetalkuav.com/dji-mavic-pro-can-light-up-the-sky-with-these-led-propellers/?utm\\_source=WeTalkUAV&utm\\_campaign=4a1d6c240d-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email&utm\\_term=0\\_1d410cb84d-4a1d6c240d-83642867](https://www.wetalkuav.com/dji-mavic-pro-can-light-up-the-sky-with-these-led-propellers/?utm_source=WeTalkUAV&utm_campaign=4a1d6c240d-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_1d410cb84d-4a1d6c240d-83642867)

## DEEP AERO Is Building AI-Driven Drone Technology On The Blockchain

DEEP AERO is building an AI-driven, autonomous, self-governing, intelligent drone/unmanned aircraft system (UAS) **traffic management (UTM) platform** on the Blockchain. It is designed to enable safe low-altitude civilian flights of manned and unmanned aircraft in the shared airspace.

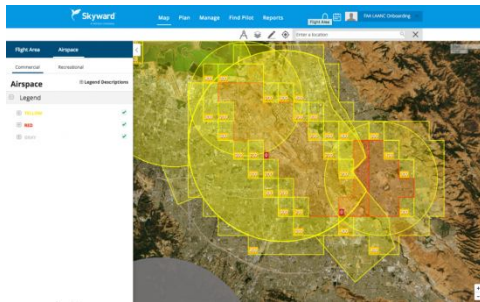
Drones monitor illegal fishing off the coasts of Libya, Japan and the Galapagos Islands and patrol oil and gas pipelines in Angola, Nigeria, Kuwait and Saudi Arabia. Archaeologists in Russia are using small unmanned systems with infrared cameras to construct a 3-D model of ancient burial mounds. In addition, researchers in Costa Rica have launched unmanned aerial vehicles into volcanic clouds to try to predict major eruptions.



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DEEP AERO is currently researching prototype technologies such as airspace design, dynamic geofencing, congestion management, terrain avoidance, route planning, re-routing, separation management, sequencing and spacing, and contingency management. Their traffic management system includes universal drone registration standards, secure identification systems, tamper-proof flight data recorders, accurate and trustworthy 3D mapping data, dynamic weather information, and secure vehicle-to-vehicle communication. DEEP AERO is headquartered in Ajman, UAE. [http://uasweekly.com/2018/03/13/deep-aero-is-building-ai-driven-drone-technology-on-the-blockchain/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_newsletter\\_2018\\_03\\_13&utm\\_term=2018-03-13](http://uasweekly.com/2018/03/13/deep-aero-is-building-ai-driven-drone-technology-on-the-blockchain/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_03_13&utm_term=2018-03-13)

### FAA Expands Testing of UAS Airspace Authorization System 13 Mar 2018 | Caroline Rees



The [Federal Aviation Administration](#) (FAA) has announced that it is expanding tests of an automated system that will ultimately provide **near real-time processing of airspace authorization requests** for unmanned aircraft (UAS) operators nationwide.

Under the FAA's Part 107 small drone rule, operators must secure approval from the agency to operate in any airspace controlled by an air traffic facility. To facilitate those approvals, the agency has previously deployed the prototype Low Altitude Authorization and Notification Capability (LAANC) at several air traffic facilities to evaluate the feasibility of a fully automated solution enabled by data sharing. Based on the prototype's success, the agency will now conduct a nationwide beta test that will deploy LAANC incrementally at nearly **300 air traffic facilities covering approximately 500 airports**.

Drone operators using LAANC can receive near real-time airspace authorizations. This dramatically decreases the wait experienced using the manual authorization process and allows operators to quickly plan their flights. Air traffic controllers also can see where planned drone operations will take place. [http://www.unmannedsystemstechnology.com/2018/03/faa-expands-testing-uas-airspace-authorization-system/?utm\\_source=Unmanned+Systems+Technology+Newsletter&utm\\_campaign=4a748df767-eBrief\\_2018\\_Mar\\_13&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-4a748df767-119747501](http://www.unmannedsystemstechnology.com/2018/03/faa-expands-testing-uas-airspace-authorization-system/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=4a748df767-eBrief_2018_Mar_13&utm_medium=email&utm_term=0_6fc3c01e8d-4a748df767-119747501)





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### **GUESSING WHEN YOUR DRONE WILL DIE** March 5, 2018 By Jim Moore

Predicting and preventing failures with **proactive maintenance** depends on data, and a former U.S. Navy pilot and engineer has created a tool to compile the numbers.



Drones contain many parts and components that are critical to flight, and the failure of any of these could bring down the aircraft. The wires connecting each motor are one example of a single point of failure, along with the motors, electronic speed controllers, and propellers.



Each electric motor is indispensable, and few have demonstrated longevity beyond 200 hours, on average requiring replacement after about 30 or 40 hours of flight time, said Tony Pucciarella, [director of operations](#) at the University of Maryland's UAS Test Site and the founder of [AlarisPro](#), an online service for unmanned aircraft fleet management and predictive maintenance.

Over the past four years, AlarisPro has accumulated data from users that offers insight into how long critical components can be expected to last. What takes the system beyond simple maintenance tracking and flight logging is **the crowdsourcing element**: Customer-reported issues with particular systems or components may reveal maintenance issues relevant to all operators of a particular model, and that information can be shared among all users, as well as with manufacturers to drive recommendations and, in some cases, design changes to improve reliability. [https://www.aopa.org/news-and-media/all-news/2018/March/05/guessing-when-your-drone-will-die?utm\\_source=drone&utm\\_medium=email&utm\\_campaign=180306drone](https://www.aopa.org/news-and-media/all-news/2018/March/05/guessing-when-your-drone-will-die?utm_source=drone&utm_medium=email&utm_campaign=180306drone)

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### **Drones Are Watching: Railroad Irks Workers With Unmanned Aircraft** Paul Ziobro

March 14, 2018

[Union Pacific](#) Corp. riled employees recently when it started flying drones over some of its railroad yards to ensure workers were following safety guidelines.

Workers say that rather than promote safety, the drones create a hazard by distracting them when they should be laser-focused while around 200-ton locomotives and railcars moving along the tracks, according to Steve Simpson, general chairperson with the International Association



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of Sheet Metal, Air, Rail and Transportation Workers. "They are no longer looking ahead or at their task at hand," he said. "They're looking up."

As of March 1, Union Pacific temporarily grounded the aerial observation so it can share its findings with the unions but plans to resume the program in coming weeks. "Their leadership will help us establish a collaborative process to address unsafe behaviors and protect employees," Union Pacific spokeswoman Raquel Espinoza said.

[https://www.wsj.com/articles/drones-are-watching-railroad-irks-workers-with-unmanned-aircraft-1521028800?mod=ITP\\_businessandfinance\\_0&tesla=y](https://www.wsj.com/articles/drones-are-watching-railroad-irks-workers-with-unmanned-aircraft-1521028800?mod=ITP_businessandfinance_0&tesla=y)

### Verizon tests a 200 pound drone to aid first responders by Taboola



Verizon's drone carries a flying cell that could provide cellular service to areas that lose coverage in the aftermath of a storm. Photos were taken at Woodbine Airport in Cape May County, NJ. March 8, 2018. ED BAIG/USA TODAY

<https://www.usatoday.com/picture-gallery/tech/news/2018/03/14/verizon-tests-a-200-pound-drone-to-aid-first-responders/32930761/>

### Drones to be First Responders for Biological and Chemical Incidents March 15, 2018 [Feilidh Dwyer](#)



When a chemical or biological accident or attack occurs, first responders are often in danger of being exposed to harmful or deadly toxins.

The recent [nerve-agent](#) attack conducted against a former Russian spy and his daughter at a British pub reportedly left as many as 21 first responders and bystanders in hospital.



*Police in hazmat suits examine the Salisbury park where a former Russian spy and his daughter were deliberately poisoned last week.*

The ROCSAFE project in Galway, Ireland, aims to: "change how chemical, biological, radioactive, nuclear or explosive (CBRNE) events are assessed to and ensure the safety of crime scene investigators by reducing the need for them to enter high-risk scenes."



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When responding to CBRNE events – remotely-controlled air and ground drones equipped with cameras and measurement instruments would be deployed. Drones could fly above the scene to get an overview of the situation and ascertain what, if any, hazards are present in the area. Drones would relay their video, images and data back to a remote command centre where it would be analyzed by decision-making software. The project will run until 2019.

<https://www.wetalkuav.com/drones-to-investigate-chemical-or-biological-events/2/>

### **Silicon Valley Counter-Drone Tech Company Raises \$20 Million** Betsy Lillian March 14, 2018



Airspace Systems Inc., a Silicon Valley-based manufacturer of an autonomous drone defense system, has [raised](#) \$20 million from a Series A funding round led by Singtel Innov8, the venture capital arm of Singtel, along with participation from s28 Capital and previous investors Shasta Ventures and Granite Hill Capital Partners.

Airspace says its solution identifies potential threats in the sky. When a rogue drone is spotted, it deploys a variety of countermeasures, including the company's proprietary Airspace Interceptor, which autonomously navigates and reacts to a rogue drone's every move and then safely captures and removes enemy drones to avoid collateral damage. The company uses artificial intelligence, machine vision and deep-learning neural networks to defend against complex drone threats faced by public event venues, military personnel and law enforcement agencies. [https://unmanned-aerial.com/silicon-valley-counter-drone-tech-company-raises-20-million?utm\\_medium=email&utm\\_source=LNH+03-15-2018&utm\\_campaign=UAO+Latest+News+Headlines](https://unmanned-aerial.com/silicon-valley-counter-drone-tech-company-raises-20-million?utm_medium=email&utm_source=LNH+03-15-2018&utm_campaign=UAO+Latest+News+Headlines)

### **Progeny Drone Start-up Rapidly Interprets Data for Farmers** Betsy Lillian March 14, 2018



*Progeny Drone CEO/Co-Founder Anthony Hearst*

Progeny Drone Inc., a Purdue University-affiliated start-up, has created software that rapidly converts drone-captured crop photos into useful information for plant breeding, crop modeling and precision agriculture, the Indiana-based university has [announced](#).



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“Rather than taking days to weeks, we can do it in minutes, and it is very affordable. We don’t need to rely on supercomputers or cloud computing. We can do it on a laptop. This will help us provide a much **faster turn-around time at a lower price** than our competitors.”

Purdue says Progeny Drone rapidly turns images into custom-zoned, quality-controlled growth and development metrics. The ability to quickly collect, interpret and analyze the data is vital in agriculture because field conditions can change rapidly, according to Hearst.

“You can just go out and fly your drone. You don’t need to set up anything in the field beforehand,” Hearst notes. [https://unmanned-aerial.com/progeny-drone-start-up-rapidly-interprets-data-for-farmers?utm\\_medium=email&utm\\_source=LNH+03-15-2018&utm\\_campaign=UAO+Latest+News+Headlines](https://unmanned-aerial.com/progeny-drone-start-up-rapidly-interprets-data-for-farmers?utm_medium=email&utm_source=LNH+03-15-2018&utm_campaign=UAO+Latest+News+Headlines)

### **Inspection Drones Illuminate Duke Energy’s World** Jason Reagan: March 12, 2018



*One of the largest American energy companies is looking to drone tech to improve and repair renewable energy sites.*

Conceived in 2014, Duke Energy’s [inspection drone](#) program now boasts more than **30 drones** to inspect solar arrays and large wind turbines. Serving more than 7 million customers across the Midwest and Southeast, the North Carolina-based utility began the program in 2015 by inspecting potentially hazardous parts of a steam plant.

Fast forward to 2016, Duke conducted its inaugural wind-farm inspection followed shortly by a solar array inspection. Drone inspections save dollars and potentially lives – manned inspections can require workers to rappel up turbines hundreds of feet tall and spend arduous hours walking across solar fields in day-long treks.

“As soon as you put an infrared camera on a drone, **what used to take three days takes two hours instead,**” said Jason Handley, director of smart grid emerging tech and operations for Duke Energy. Speaking during the 2018 ARC Industry Forum in Orlando, Handley lauded UAV tech for quickly and easily targeting failed solar cells by deploying infrared and other sensor arrays from the air. <https://dronelife.com/2018/03/12/inspection-drones-illuminate-duke-energys-world/>



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### Live from the FAA UAS Symposium Jeremiah Karpowicz March 15, 2018



The 3rd Annual [FAA Unmanned Aircraft Systems \(UAS\) Symposium](#) recently wrapped up, but thanks to the [#UAS2018 hashtag](#), info and insight about the event came out live and in real-time. FAA Acting Administrator Dan Elwell was on hand to highlight the message of how the FAA wanted to collaborate with the drone industry, while US Secretary of Transportation Elaine Chao [recorded a message](#) for the audience to let them know that regulators understand how important issues like **BVLOS operations and flying over people** are to industry stakeholders. Speakers from other government entities like NASA and the Department of Homeland Security along with industry representatives from Amazon, Airbus Aerial and GE took part in discussions about some of the most pressing issues for the present and future of the drone industry.

The message of the ["FAA being open for business"](#) was especially prevalent, as those were the exact words used by people like Derek Kan, undersecretary for policy at the U.S. Department of Transportation, as well as Earl Lawrence, the FAA's Unmanned Aircraft Systems Integration Director, among others. Conversations about RemoteID, LAANC, a UTM System, BVLOS operations and how certain process can and should be automated dominated many of the panels and discussions, and it was enlightening to see how so many of these topics are intertwined. Talking through these issues with a focus on safety for everyone on the ground and in the air was at the core of every discussion in one way or another.

Representatives from the FAA and AUVSI live tweeted quotes and pictures throughout the event, although plenty of attendees got in on the action as well. What's below is a brief look at those live tweets which convey some of most prominent topics and issues that were discussed at the event by stakeholders from across the regulatory and commercial landscape. For plenty more direct quotes, videos and pictures, check out the [#UAS2018 hashtag](#).

[https://www.expouav.com/news/latest/live-faa-symposium/?utm\\_source=informz&utm\\_medium=email&utm\\_campaign=newsletter&utm\\_content=newsletter](https://www.expouav.com/news/latest/live-faa-symposium/?utm_source=informz&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter)