



## UAS and SmallSat Weekly News

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### Managers iconic Swiss cliff face restaurant want to ban ‘annoying’ drones Haye

Kesteloo - Jun. 27th 2019



The new managers of the iconic Swiss cliff face restaurant are calling for a ban on ‘annoying’ drones. The Äscher mountain restaurant is located in the eastern part of [Switzerland](#) and is a very popular destination among Instagram users, many of whom use drones to capture the beautiful scenery.

“There are a huge number of drones flying around. They fly over the whole terrace and even right up to the windows,” manager Melanie Gmünder told national broadcaster SRF. She added, “Drones are annoying. It’s disrespectful and it’s unpleasant. They are intruding on our privacy.”

Because of its scenic location, at the foot of a steep mountain cliff, the restaurant has become very popular among Instagram users. Gmünder is one of the new managers who took over about a month ago. She said that the restaurant had become a victim of its own success.

[The Local](#) reports that under Swiss law, drone pilots must respect people’s privacy and are not allowed to fly low over private property or places where people are gathering. The law even specifies that for safety reasons drones are not allowed to fly within 100 m or 300 feet of groups of people without a special permit. <https://dronedj.com/2019/06/27/managers-iconic-swiss-cliff-face-restaurant-ban-annoying-drones/>

### FlytGCS Empowers Drone Operations Managers to Share Live Video & Telemetry with Customers over 4G/5G July 3, 2019 News



Drone service providers and enterprise drone program managers can now securely share remote drone operations data, while restricting drone control to only a selected set of stakeholders. This is made possible by the latest enhancement to FlytGCS, a SaaS offering designed to automate, simplify and rapidly



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scale drone missions.

Drone operations managers increasingly monitor their drone operations remotely from a centralized control room – while pilots and visual observers deploy and oversee drone fleets on-site. Such missions also involve subject-matter experts, senior management, technology or domain consultants, regulatory authorities, solution partners and other third parties.

Providing the right level of live, remote access to various participants is key to maximizing the productivity, cost-effectiveness, and utilization of drone fleets, while ensuring that mission control remains secure and restricted to only a few, authorized users. This is now possible via guest link sharing in FlytGCS, whose users can quickly and seamlessly share the live map view as well as HD video feeds of their drone missions with decision makers **across the world**.

Video sharing can enable security directors to better manage intrusion incidents, public safety chiefs to better direct emergency response, maintenance managers to better direct asset monitoring missions, utility infrastructure inspectors to better analyze power lines and wind turbines, project managers and investors to better monitor construction projects and insurance appraisers to better assess disaster-related damages. [https://uasweekly.com/2019/07/03/flytgcs-empowers-drone-operations-managers-to-share-live-video-telemetry-with-customers-over-4g-5g/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_daily\\_newsletter\\_07\\_05\\_2019&utm\\_term=2019-07-05](https://uasweekly.com/2019/07/03/flytgcs-empowers-drone-operations-managers-to-share-live-video-telemetry-with-customers-over-4g-5g/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_05_2019&utm_term=2019-07-05)

### **Terra Drone Invests In RoNik Inspectioneering to Grow Confined Space Inspection Portfolio** July 3, 2019 News



[Terra Drone Corporation](#), one of largest providers of industrial drone solutions in the world, is announcing the completion of its investment in RoNik Inspectioneering, a leading Dutch company that performs visual and ultrasonic inspections using wireless robotics. The company will focus on the inspection of industrial, hazardous, and enclosed spaces, such as storage tanks, boilers, super heaters, furnaces, stacks and pipelines.

RoNik has performed more than 200 inspections and counts global oil and gas companies among its clients. The company developed a propriety technology for ultrasonic thickness testing at hard-to-reach indoor places. The use of drones for tank inspections not only eliminates the need to put humans in dangerous places, but it also reduces the time for



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inspection by 40% to 60%. The data is shared in the form of cloud-based 3D models that are fully compliant with storage tank industry inspection standards.

[https://uasweekly.com/2019/07/03/terra-drone-invests-in-ronik-inspectioneering-to-grow-confined-space-inspection-portfolio/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_daily\\_newsletter\\_07\\_05\\_2019&utm\\_term=2019-07-05](https://uasweekly.com/2019/07/03/terra-drone-invests-in-ronik-inspectioneering-to-grow-confined-space-inspection-portfolio/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_05_2019&utm_term=2019-07-05)

### Weaver Consulting Adopts Delair UX11 UAV for Large Scale Surveying, Mapping

July 3, 2019 News



Delair, a supplier of commercial drone solutions, along with one of its regional resellers, Seiler Instrument, today announced that Weaver Consultants Group has adopted the Delair UX11 UAV for its work in large-scale volumetric surveying and topographic mapping. The firm provides a full range of engineering services and has a particular expertise in solid waste and landfill

projects.

The firm's initial use of the new platform has been in developing digital twins of its clients' sites – mainly large disposal and landfill operations – and performing regular volume calculations to assist in managing the land use at those sites. "We can do three or four 45-minute flights per day and get reasonably high-resolution data, even flying at 234 feet. We can do 900 acres in a day, and there's no way we could do that with rotor style drones, much less by foot," said Kurt Aper, Unmanned Aerial Team Lead at Weaver. A project of more than 40 acres is the threshold where the real benefits of a fixed-wing UAV become clear. The drone is helping landfill developers and operators estimate the volume of materials that are filling their sites and develop expansion plans. [https://uasweekly.com/2019/07/03/weaver-consulting-adopts-delair-ux11-uav-for-large-scale-surveying-mapping/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_daily\\_newsletter\\_07\\_05\\_2019&utm\\_term=2019-07-06](https://uasweekly.com/2019/07/03/weaver-consulting-adopts-delair-ux11-uav-for-large-scale-surveying-mapping/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_05_2019&utm_term=2019-07-06)

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### Drones could soon deliver parcels, health care June 28, 2019 Gary Robertson Mark Blanks

Look to the skies. Birds, fireflies, mosquitoes and other winged creatures from the natural world increasingly will be joined by swarms of drones as companies race to develop an autonomous drone delivery industry.



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Virginia Tech has been working with Alphabet, Google's parent company, on Project Wing, the nation's first FAA-approved commercial delivery service using long-distance aerial **drones out of sight of operators**. (The drones have a delivery range up to six miles.) The service is expected to begin operation there **this year**.

As one example of how drones can be employed, Project Wing delivered hundreds of lunches to Virginia Tech students in September 2016. The event marked the **first large-scale drone delivery** to members of the general public. The Federal Aviation Administration has estimated that as many as 1.6 million commercial drones will be in use by 2021.

Virginia Tech research also includes a project to incorporate autonomous algorithms and machine learning in using drones for **search and rescue missions**, funded by a \$1.5 million grant from the National Science Foundation.

In another drone-related research project at Virginia Tech, Blanks and MAAP worked with insurance giant State Farm to gain an FAA waiver to allow aerial drones to **survey property damage** caused by hurricanes Florence and Michael.

At Virginia Commonwealth University in Richmond a group of seniors in the College of Engineering have developed a preliminary model for an **"ambulance" drone** designed to deliver and administer a lifesaving injection of the opioid-overdose reversal drug Naloxone. A remote drone operator guides the injections with the aid of a camera mounted on the front of the drone.

At Old Dominion University in Norfolk, researchers and students worked with the Navy seeking a way for an aerial drone to **carry small ship parts or packages** weighing as much as 30 pounds to vessels on the high seas.

But there's a caveat: "What they want is to be able to locate a ship in an environment when they don't necessarily have radio communication with a drone" and they **don't have a GPS signal**, says Thomas Alberts, professor of mechanical and aerospace engineering at ODU's Batten College of Engineering & Technology.

Research scientists at the University of Virginia's School of Engineering & Applied Science have been studying **butterflies and other flying insects** as they examine the possibilities of developing small robotic air vehicles.



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Other U.Va. research involves **autonomous underwater vehicles** that could be deployed for long periods of time to collect data for scientists or as a surveillance tool for the military.

But far more work lies ahead. "The fundamental science takes years to discover the secrets of flying and swimming," says Haibo Dong, a U.Va. aerospace engineer and associate professor. <http://www.virginiabusiness.com/news/article/test-flight>

### Chasing SpaceX, Amazon Seeks to Launch 3,236 Internet Satellites [Todd Shields](#)

July 5, 2019



*Jeff Bezos, founder and chief executive officer of Amazon.com Inc., speaks during a discussion at the Air Force Association's Air, Space and Cyber Conference.*

Amazon.com Inc. asked for U.S. permission to launch 3,236 communications satellites, joining a new space race to offer internet service from low orbits and challenge the fleet planned by Elon Musk's SpaceX.

Amazon in a July 4 filing told the Federal Communications Commission its Kuiper satellites will deliver broadband to tens of millions of consumers and businesses that now lack adequate access to the internet. The agency coordinates trajectories and radio-frequency use. The FCC already has approved nearly **13,000** low-Earth orbit satellites. Those include 11,943 for Musk's Space Exploration Technologies Corp., which [launched an initial batch](#) of 60 spacecraft in May.

Amazon in its FCC application said its satellites would operate at altitudes of about 370-to-390 miles. <https://www.bloomberg.com/news/articles/2019-07-05/amazon-asks-to-join-broadband-space-race-with-elon-musk-s-spacex>

### Meet THOR, the Air Force's New Drone-Killing Microwave Gun Coming to a base near you Task and Purpose July 5, 2019



*"It's built to negate swarms of drones," Anderson said. "We want to drop many of them at one time without a single leaker getting through."*

U.S. military bases across the globe may soon have a New Mexico-made, high-powered microwave weapon at their disposal to instantaneously **down swarms of enemy drones**.



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The Air Force Research Laboratory at Kirtland Air Force Base unveiled the weapon Thursday morning in a live demonstration with local reporters, who watched the system effortlessly knock a hovering drone out of the sky with an invisible and inaudible electromagnetic wave.

The \$15 million system, called the Tactical High Power Microwave Operational Responder, or THOR, disabled the unmanned aerial vehicle in a flash, sending it spiraling to the ground the moment the electromagnetic ray hit it. "It operates like a flashlight. It spreads out when the operator hits the button, and anything within that cone will be taken down. It engages in the blink of an eye."

The AFRL built the machine on an 18-month timeline to get it into war fighters' hands as fast as possible, given the increasing military threat from drones, said Kelly Hammett, head of AFRL's Directed Energy Directorate in Albuquerque. The system is aimed at protecting military bases from multiple-drone attacks, which the Air Force has identified as its **No. 1 priority** for emerging "directed energy," or microwave and laser, defense systems.

<https://nationalinterest.org/blog/buzz/meet-thor-air-forces-new-drone-killing-microwave-gun-65541>

## Electric air taxis powered by hydrogen promise greater range for intercity commutes

July 7, 2019 Tom Metcalfe



*The hydrogen-powered Skai air taxi could fly five people or 1,000 pounds of cargo up to 400 miles.*

More than **100** electric air taxi designs are already in the works for short hops in cities, including the [Airbus Vahana](#), the German [Volocopter](#) and [Uber's Elevate project](#). But now, a new design aims to rise above the others with its use of hydrogen fuel cells instead of batteries to power longer flights that can carry more weight.

Hopkinton, Massachusetts-based Alaka'i Technologies says **hydrogen fuel cells** will give its six-rotor Skai air taxi greater range and lifting power than competitors using batteries. The company recently [unveiled a mockup in Los Angeles](#), and says it will soon start tests on a flying prototype. The new vehicle could be in production in the United States by 2021, although it will need approval from the Federal Aviation Administration.



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Alaka'i president Brian Morrison said the Skai could fly five people or 1,000 pounds of cargo up to **400 miles** — between two and four hours of flight, depending on the size of the aircraft's fuel tank. The greater range and power means it could fly between nearby cities, instead of just on short trips within a city, and could take on [air ambulance work](#), freight deliveries or disaster relief tasks.

Initially it will need a qualified helicopter pilot to fly passengers, but the company is working with the FAA to allow [autonomous passenger flights without a pilot](#).

<https://www.nbcnews.com/mach/science/electric-air-taxis-powered-hydrogen-promise-greater-range-intercity-commutes-ncna1026981>

### **Medical drones market expects to reach almost \$400M by 2025** BUSINESS

NEWS yesterday AZ BUSINESS MAGAZINE



The medical [drones](#) market is set to grow from its current market value of more than \$88 million to over \$399 million by 2025 as reported in the latest study by [Global Market Insights, Inc.](#)

Technological advancements in medical drones should increase its preference during emergency cases. Companies are developing drones with diagnostic imaging capabilities that will have a role in remote locations using telemedicine technology.

Growing public acceptance of medical drones in developing economies will surge demand. The drugs/pharmaceutical transfer segment is anticipated to see 25% growth in the near future. These drones help in delivering drugs during disasters and medical emergencies.

The emergency medical services segment was valued at \$40 million in 2018, and it will continue to grow in coming years. Lack of access to medicines during critical cases is one of the leading causes of deaths in underdeveloped regions.

Notable industry players are DHL, DJI, Embention, Flirtey, Matternet, Vayu and Zipline.

<https://azbigmedia.com/business/health-care/medical-drones-market-expects-to-reach-almost-400m-by-2025/>

### **Drones Land in the Cell and Gene Therapy Space** Christina Bennett July 5, 2019



Cell and gene therapies could be flying high soon, joining the medical supplies, whole blood products, and even organs being transported by drones. In collaboration with RPS Aerospace, the Italy-based biotech company Anemocyte developed a remotely





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piloted drone system to securely **transport final cell and gene therapy products** from manufacturing sites to clinical centers.

The current prototype can also transport apheresis material, bone marrow, and biopsy specimens and is equipped with GPS tracking, anti-tampering technology, temperature control, and continuous real-time monitoring of these parameters during flights. At this time, all applications are for research and development purposes only, and the first simulation flight, a **50 km** route, is anticipated for later this year. <https://www.genengnews.com/tech-exclusives/drones-land-in-the-cell-and-gene-therapy-space/>

### **Congress Takes Aim at Chinese-Made Drones** Katy Stech Ferek July 7, 2019



*A drone in the works at Impossible Aerospace's Santa Clara, Calif., facility*

WASHINGTON—Citing national security, lawmakers are looking to ban **military** purchases of Chinese-made drones—which could boost prospects for U.S. makers struggling to compete.

The [National Defense Authorization Act passed](#) by the Senate last week would bar Chinese drones for military use as U.S. officials grow worried that the country's reliance on Chinese drones may be putting critical U.S. infrastructure at risk. They are concerned the drones may be sending information back to the Chinese government or hackers elsewhere to use for cyberattacks or other offenses. The [House version of the bill](#), expected to get a vote this month, would ban foreign drones.

In addition to multimillion-dollar drones capable of flying long distances and carrying out sophisticated tasks, the U.S. military also relies on smaller, more agile drones for surveillance, training and other uses.

The Pentagon last year banned purchases of commercial, off-the-shelf drones until it can determine how to mitigate security risks, including when drones are used for surveillance of military installations and critical infrastructure. Military units can ask for exemptions.

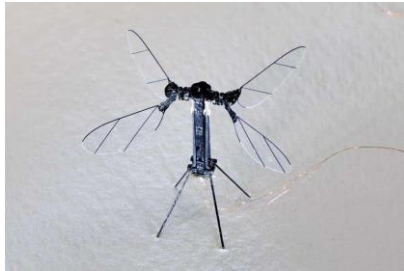
<https://www.wsj.com/articles/congress-takes-aim-at-chinese-made-drones-11562405401>



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### Tiny flying insect robot has four wings and weighs under a gram TECHNOLOGY 26

June 2019 Noah T. Jafferis and E. Farrell Helbling, Harvard Microrobotics Laboratory By Donna Lu



A solar-powered winged robot has become the lightest machine capable of flying without being attached to a power source.

Weighing just 259 milligrams, the insect-inspired RoboBee X-Wing has [four wings](#) that flap 170 times per second. It has a wingspan of 3.5 centimetres and stands 6.5 centimetres high.

Its wings are controlled by two muscle-like plates that contract when voltage passes through them. They are powered by six tiny solar cells weighing 10 milligrams each, which are located above the wings so as not to interfere with flight.

The insect robot's wings begin flapping when exposed to light. Currently, it has only been tested in the lab, where it is powered by a combination of halogen and LED lighting. The robot currently requires the equivalent of three times the intensity of natural sunlight, so isn't yet able to fly outside.

Other researchers at the University of Washington have created a 43-milligram robot that flies with no moving parts, but it still requires external wires for power. Unlike the RoboBee X-Wing, the powered robot propels itself upwards using electrohydrodynamic thrust. An electric field creates charged air molecules that smack into neutral air molecules, generating upward momentum. <https://www.newscientist.com/article/2207687-tiny-flying-insect-robot-has-four-wings-and-weighs-under-a-gram/>

### Skymagic delivers drone light show at Zurich Festival APPLICATION EUROPE EVENTS

INNOVATION NEWS ALEX DOUGLAS JULY 8, 2019



Skymagic delivered a drone light show at this year's Zurich Festival, performing across the weekend in front of over a **million** spectators.

Skymagic put on a synchronised swarm of **150 drones**, which were launched directly from a floating pontoon in the middle of the lake that was custom built by the festival exclusively for the drone show.



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The opening scene saw the iconic Zurich Festival lion let out a huge roar followed by a suite of bold and compelling formations, blending EWZ's renewable message synchronized to a driving, upbeat score. The show was specifically designed with **3D formations**, allowing the entire audience the opportunity to view the spectacular performance from every position around the lake. [https://www.commercialdroneprofessional.com/skymagic-delivers-drone-light-show-at-zurich-festival%ef%bb%bf/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-306621-Commercial+Drone+Professional+DNA+-+2019-07-08](https://www.commercialdroneprofessional.com/skymagic-delivers-drone-light-show-at-zurich-festival%ef%bb%bf/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-306621-Commercial+Drone+Professional+DNA+-+2019-07-08)

**9Jul19**

**US Navy declares IOC for MQ-8C Fire Scout unmanned helicopter** 08 JULY, 2019  
FLIGHTGLOBAL.COM GARRETT REIM LOS ANGELES

Initial operational capability (IOC) clears the way for the unmanned air vehicle to begin fleet operations and training, says the USN. The MQ-8C is to deploy aboard the USN's littoral combat ships in FY2021 and is intended for intelligence, and surveillance and reconnaissance, as well as precision targeting.



The UAV is based on the commercial Bell 407 airframe, albeit with seats and other manned avionics equipment stripped out and replaced with remote controls and extra fuel tanks. The aircraft has a flight endurance of 12h, a max payload of 700lb and a range of 150nm.

It will also be equipped with a Leonardo Osprey 30 lightweight active electronically scanned array radar that allows for a larger field of view compared to the MQ-8B's radar. The radar also includes a range of digital modes including weather detection, air-to-air targeting and a ground-moving target indicator.

The MQ-8C has flown over 1,500h with more than 700 sorties to date, says the USN. Over the next few years, Northrop Grumman plans to deliver 38 aircraft to the USN.

<https://www.flightglobal.com/news/articles/us-navy-declares-ioc-for-mq-8c-fire-scout-unmanned-h-459525/>

**CITY DRONE KEEPS INSPECTORS SAFE** July 8, 2019 Jim Moore

A Florida Gulf Coast city started with a simple goal: Reduce the risks associated with climbing ladders to conduct building inspections.



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Deputy Building Official David Gilson and Arborist Shannon Brewer have created new capabilities for Tarpon Springs, Florida, likely to extend beyond building inspections and vegetation surveys.

Deputy Building Official David Gilson, a certificated commercial pilot and a certificated remote pilot, said it took a little doing to convince city leaders that an unmanned aircraft provides a cost-effective and safe alternative to climbing ladders to inspect construction projects.

Shannon Brewer, the city arborist, brought no aviation experience to her new role as a remote pilot, but has become an accomplished, careful, and enthusiastic pilot of quadcopters.



Tarpon Springs building officials once had to climb ladders to inspect construction projects in progress. Now, a drone can eliminate the need for most of those climbs. Brewer found that mapping missions are also useful for spotting tree diseases when they can be (forgive me) nipped in the bud. Brewer is now available on call for inspection jobs of various kinds, and said

her newly developed skills also add an element of fun to her job. [https://www.aopa.org/news-and-media/all-news/2019/july/08/city-drone-keeps-inspectors-safe?utm\\_source=dronepilot&utm\\_medium=email](https://www.aopa.org/news-and-media/all-news/2019/july/08/city-drone-keeps-inspectors-safe?utm_source=dronepilot&utm_medium=email)

## Impressive Drone TED Talk

<https://www.youtube.com/watch?v=w2itwFJCgFQ>

## DARPA Funds Machine Learning-Driven SIGINT Technology 09 Jul 2019



[BAE Systems](#) has announced that it has been awarded funding from the Defense Advanced Research Projects Agency to integrate machine-learning technology into platforms that decipher radio frequency signals. Its Controllable Hardware Integration for Machine-learning Enabled Real-time Adaptivity solution provides a

reconfigurable hardware platform for ML algorithm developers to make sense of radio frequency signals in increasingly crowded electromagnetic spectrum environments.

The \$4.7 million contract includes hardware delivery along with integration and demonstration support. CHIMERA's hardware platform will enable algorithm developers to decipher the ever-



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growing number of RF signals, providing commercial or military users with greater automated situational awareness of their operating environment. This contract is adjacent to the previously announced award for the development of data-driven ML algorithms under the same DARPA program (Radio Frequency Machine Learning Systems).

[https://www.unmannedsystemstechnology.com/2019/07/darpa-funds-machine-learning-driven-sigint-technology/?utm\\_source=Unmanned+Systems+Technology+Newsletter&utm\\_campaign=9ceceda4c1-eBrief\\_2019\\_Jul\\_09&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-9ceceda4c1-119747501](https://www.unmannedsystemstechnology.com/2019/07/darpa-funds-machine-learning-driven-sigint-technology/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=9ceceda4c1-eBrief_2019_Jul_09&utm_medium=email&utm_term=0_6fc3c01e8d-9ceceda4c1-119747501)

### **DARPA Funds Machine Learning-Driven SIGINT Technology** 09 Jul 2019



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[https://www.unmannedsystemstechnology.com/2019/07/darpa-funds-machine-learning-driven-sigint-technology/?utm\\_source=Unmanned+Systems+Technology+Newsletter&utm\\_campaign=9ceceda4c1-eBrief\\_2019\\_Jul\\_09&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-9ceceda4c1-119747501](https://www.unmannedsystemstechnology.com/2019/07/darpa-funds-machine-learning-driven-sigint-technology/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=9ceceda4c1-eBrief_2019_Jul_09&utm_medium=email&utm_term=0_6fc3c01e8d-9ceceda4c1-119747501)

### **U.S. Federal Agency Tests and Approves DJI's Government Edition Solution** Malek

Murison July 09, 2019

The US Department of the Interior has completed an independent 15-month analysis and validation of DJI's Government Edition Solution. The news represents a significant and positive step in DJI's ongoing struggle to prove its customers' data is safe.

The Chinese manufacturer's hardware and software are relied upon by government and industry for all sorts of sensitive missions. The company is also an industry leader in a field



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littered with American failures. Unfortunately for DJI, both factors have been a recipe for intense scrutiny in recent years.

[Government Edition](#), which was announced last month in yet another step towards appeasing concerned government agencies, has been cleared for takeoff after more than 15-months of rigorous assessment.

The US Department of the Interior validated the flight, payload, and data management assurance performance of DJI Matrice 600 Pro and Mavic Pro drones equipped with Government Edition firmware and software.

Flight Test and Technical Evaluation Report

DJI Unmanned Aircraft System (UAS)  
Mission Functionality and Data Management Assurance Assessment

U.S. Department of the Interior  
Office of Aviation Services  
Boise, Idaho



<https://dronelife.com/2019/07/09/u-s-federal-agency-tests-and-approves-djis-government-edition-solution/>

You can read the full report here: [Department of the Interior, Flight Test and Technical Evaluation Report](#)

“No indication that data was transmitted outside of the system...”

The main DOI’s findings were presented in a flight test and technical evaluation [report issued last week](#).

[https://dronelife.com/2019/07/09/u-s-federal-agency-tests-and-](https://dronelife.com/2019/07/09/u-s-federal-agency-tests-and-approves-djis-government-edition-solution/)

## Supercomputing nanosatellites launched NICK FARRELL 09 JULY 2019



ESA Partnership Projects mission has launched two tiny supercomputing nanosatellites aboard a **Soyuz** rocket from Vostochny in Russia.

The parallel supercomputing scalable devices, aboard the lightweight, shoebox-sized nanosatellites, can be programmed to **both receive and process data while in orbit**. This enables them to select high-quality data and immediately transfer it to Earth. Their owner, Spire Global, wants to use continuous global monitoring to track aircraft, ships and weather patterns using a large constellation of **80** nanosatellites that report to a global network of ground stations.

The two new satellites were designed, built and tested at Spire Global's factory in Glasgow, with support from the UK Space Agency. Peter Platzer, chief executive of Spire Global, said: "Just one of our small satellites can collect over a terabyte of data per day, which would be prohibitive to



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download. **It must be analyzed in orbit** so that true insights can be delivered to customers directly and in a timely fashion.”

Khalil Kably, program manager at ESA, said: "The whole idea of the Pioneer program is to give European and Canadian industries access to space, rapidly and at low cost. As soon as they have an innovative idea, such as supercomputing by Spire here, we want them to be able to try it in orbit. It's the ability to go from a new idea to market very quickly, through in-orbit validation."

<https://www.fudzilla.com/news/network/49014-supercomputing-nanosatellites-launched>

**10Jul19**

### **LAPD moves one step closer to permanently adding drones to its arsenal of tools**

MARK PUENTE JUL 09, 2019

The Police Commission approved a report Tuesday on the LAPD’s pilot program to use the airborne devices and will consider a new policy in 60 to 75 days to make the program permanent.



*Craig Roberts, of Los Angeles, of Stop LAPD Spying Coalition, lets the commissioners know he is against the LAPD drone pilot program*

The request came nearly two years after the five-member civilian Police Commission approved strict guidelines for police to use the remote-controlled devices in dangerous situations such as a barricaded suspect, active shooter or explosive device.

Commissioners Dale Bonner asked how often the LAPD would update drone technology or weaponize them without telling commissioners. “I can assure you that will not happen,” Deputy Chief Horace Frank said about weaponizing.



The commission and public would have “no appetite” for using drones in that manner, Moore added.

Commission President Steve Soboroff said the four cases when officers used drones show that the circumstances were very strict and training was **flawless**. The cameras kept police, the public and suspects safe, he added. “I’m enthusiastic about moving forward with this,” Soboroff said. <https://www.latimes.com/local/lanow/la-me-drones-privacy-lapd-20190709-story.html>



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### UAV Firm Terra Drone Soars into Middle East Market Jason Reagan July 10, 2019



Japanese drone provider [Terra Drone Corporation](#) is teaming up with Saudi oil-and-gas inspection firm [NDT Corrosion Control Services Co.](#) to form Terra Drone CCS, a venture that will focus on the Middle East market.

With **major oil clients** such as the Abu Dhabi National Oil Company, Saudi Aramco, Kuwait Oil Company, and Oman Oil Company, NDT will provide a hefty client base for Terra Drone’s UAV inspection services across the region – not only for oil and gas companies, but also for utilities, urban surveying and telecommunications. Terra Drone CCS will deploy one of the company’s newest tech branches, [Terra Inspectioneering](#) to perform visual and ultrasonic inspections using proprietary drone tech.

Last month, Terra Drone’s European office announced an agreement to [provide drone services](#) to the UK’s national mapping agency, Ordnance Survey. The contract includes services from orthomosaics to digital terrain models and digital surface models. Terra Drone Europe plans to survey more than 500 locations using fixed-wing and multi-rotor drones.

More recently, Terra Drone demonstrated an unmanned traffic management system developed jointly with drone traffic management firm [Unify](#). In May, the Japanese company [established Terra Drone Angola](#) after receiving multiple contracts from major oil and gas companies in West Africa. <https://dronelife.com/2019/07/10/uav-firm-terra-drone-soars-into-middle-east-market/>

### U.S. Lawmakers Express Frustration with Drone Remote ID Delay Miriam McNabb July 10, 2019



Last week, members of the U.S. House of Representatives Committee on Transportation and Infrastructure sent a letter – and a clear message – to Department of Transportation Secretary Elaine Chao: move forward on remote ID for drones. The full text of the letter can be found [here](#), but the gist is clear: get remote ID done.

“We write to register our ongoing concerns regarding the continuing delay in the issuing of the Federal Aviation Administration’s rule requiring remote identification for unmanned aircraft systems and urge you to dedicate the necessary staff and resources for the rapid publication of a notice of proposed rulemaking on this subject.” The failure to complete Remote ID poses “serious risks” to the airspace and also “stifle innovation” in the drone industry.





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The letter points out the extent of the slip: the 2016 FAA Authorization Extension called for the regulations or guidance to be issued a year ago, by July of 2018. From the initiation of rulemaking on remote ID in February of 2018, to an announced publication date of May, 2019, the date is currently July 21, 2019. But even so, enactment of Remote ID is a long way off.

<https://dronelife.com/2019/07/10/u-s-lawmakers-express-frustration-with-drone-remote-id-delay-this-summer-says-standards-committee-chair/>

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### Branson's Virgin Orbit moves closer to commercial satellite launch Eric M. Johnson



SEATTLE (Reuters) - Richard Branson's Virgin Orbit on Wednesday released a rocket from the wing of a modified Boeing 747 jetliner in mid-air in a key test of its high-altitude launch system for satellites. In the penultimate mission before Virgin Orbit offers commercial satellite launch services, the 70-foot LauncherOne rocket cleanly separated from the jetliner at

roughly 35,000 feet. The rocket, loaded with water and antifreeze to simulate the weight of fuel, crashed as planned into the Mojave Desert as the jetliner, nicknamed Cosmic Girl, continued on its flight path.

Dan Hart, chief executive officer of Virgin Orbit, told Reuters the test was a "capstone" event on the company's path to making orbital satellite placement "almost routine. This test puts us into a pre-launch posture." Assembly of Virgin's first commercial rocket will finish this month, and the company plans to launch test satellites into orbit this summer.

Competition is fierce among Virgin Orbit, Firefly and U.S.-New Zealand company Rocket Lab which are designing smaller or non-traditional systems to inject smaller satellites into orbit and meet growing demand. <https://www.reuters.com/article/us-space-exploration-virgin/bransons-virgin-orbit-moves-closer-to-commercial-satellite-launch-idUSKCN1U51TI>

### Partners Test Temperature-Controlled Medicine Deliveries via UAV Betsy Lillian July 10, 2019



A consortium led by humanitarian aid organization Direct Relief has completed a testing program to deliver temperature-controlled medicines and vaccines by using unmanned aerial vehicles. The initiative was the fourth in a series of proof-of-concept missions the group has undertaken



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to demonstrate the potential of using UAVs to safely deliver these items to hard-to-reach locations. Direct Relief, Merck, Softbox, AT&T and Volans-i are working together on the project. The pilot was conducted in the Bahamas, and the group previously completed test flights in Switzerland and Puerto Rico.

The pilot test was conducted **fully autonomously** with cold-chain delivery technology, allowing for precise temperature control of medicines and vaccines at temperatures as low as -70 degrees C. It used live, continuous temperature tracking through the duration of the flight with cloud-based, real-time data analysis and collection. In the test, a drone flew over open water between the islands of the Bahamas beyond the operator's line of sight. [https://unmanned-aerial.com/partners-test-temperature-controlled-medicine-deliveries-via-uav?utm\\_medium=email&utm\\_source=LNH+07-11-2019&utm\\_campaign=UAO+Latest+News+Headlines](https://unmanned-aerial.com/partners-test-temperature-controlled-medicine-deliveries-via-uav?utm_medium=email&utm_source=LNH+07-11-2019&utm_campaign=UAO+Latest+News+Headlines)

### DroneDeploy launches single enterprise solution for all drone operations

APPLICATION BUSINESS HEADLINE NEWS UK ALEX DOUGLAS JULY 11, 2019



The launch includes automated drone fleet management, enhanced workflow integrations, a low-altitude inspection mode, and advanced analytic capabilities.

CEO and co-founder Mike Winn commented: "Today's product launch is a reflection of the demand from our customers for a complete enterprise-grade drone operating system. We have customers with **fleets of 100+ drones** looking for a single enterprise platform for their entire drone program, and we believe this launch will reshape how they manage their drone operations and data."

The new release includes drone operations management, workflow integrations, inspection with manual flight, Drone Academy and Earthworks.

[https://www.commercialdroneprofessional.com/dronedeploy-launches-single-enterprise-solution-for-all-drone-operations/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-306942-Commercial+Drone+Professional+DNA+-+2019-07-11](https://www.commercialdroneprofessional.com/dronedeploy-launches-single-enterprise-solution-for-all-drone-operations/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-306942-Commercial+Drone+Professional+DNA+-+2019-07-11)

### Washington State Patrol builds up fleet of 111 drones TOM BANSE JUL 9, 2019



In the span of just a few years, the Washington State Patrol has built up a fleet of more than 100 drones. The Washington patrol says its small quadcopters are used for crash investigations, not for surveillance.

WSP Detective Sergeant Clint Thomas said roughly 100 state troopers



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and detectives across Washington are now trained to fly camera-equipped drones. The state may upgrade and further expand its fleet with a fresh infusion of cash recently approved by the state legislature.

Thomas said a compact two-car collision scene can be mapped in **ten minutes** with a drone compared to a half-hour to an hour using traditional methods such as with a tape measure, chalk marks or laser scanner.



*Screen shot from a 3-D crash scene model made by combining multiple still photos taken by one of the state patrol's drones.*

Many local police departments and the Oregon State Police deploy drones for a wider range of purposes including observation of armed, barricaded suspects and search and rescue.

The Washington State Patrol drone fleet appears to be one of the **largest**, if not the biggest by far, owned by a state or local government anywhere in the country. [https://www.nwnewsnetwork.org/post/washington-state-patrol-builds-fleet-111-drones?mkt\\_tok=eyJpIjoiWkdKaU4yWTJZalZtWkdObSIsInQiOiJscmF3UVEwQk9xd0ZrdJptVXRYblNjWkp2Z1ZFMkswNlIKMk9JK01Kb01ObzUxSHUyVmF4aVNrWmxBM0VPemZteGxoXC9SWHhGdGIQdUl6c1NwNGNPZHFLK2t6SmtUYVluVlILZ0tqYUITUFZpbXJXc0pCb0QxamVzQUlLOVhZZE8ifQ%3D%3D](https://www.nwnewsnetwork.org/post/washington-state-patrol-builds-fleet-111-drones?mkt_tok=eyJpIjoiWkdKaU4yWTJZalZtWkdObSIsInQiOiJscmF3UVEwQk9xd0ZrdJptVXRYblNjWkp2Z1ZFMkswNlIKMk9JK01Kb01ObzUxSHUyVmF4aVNrWmxBM0VPemZteGxoXC9SWHhGdGIQdUl6c1NwNGNPZHFLK2t6SmtUYVluVlILZ0tqYUITUFZpbXJXc0pCb0QxamVzQUlLOVhZZE8ifQ%3D%3D)

**12Jul19**

## Airobotics Unveils First In-House Developed Payload at Security & Defense Expo

July 10, 2019 News



Drone startup, [Airobotics](#), today unveiled a stabilized payload for inspection and security applications at ADS' [2019 Warrior Expo East](#). Weighing less than 1.2 kg and small in dimension, Airobotics' Trion is a high-definition, Electro-Optical and InfraRed gyro-stabilized payload. Trion pushes the limits on existing and competing capabilities of stabilized payloads available today. Designed for superior performance, Trion carries a unique set of advanced capabilities for object identification, real-time tracking and comprehensive data harvesting. [https://uasweekly.com/2019/07/10/airobotics-unveils-first-in-house-developed-payload-at-security-defense-expo/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_daily\\_newsletter\\_07\\_11\\_2019&utm\\_term=2019-07-12](https://uasweekly.com/2019/07/10/airobotics-unveils-first-in-house-developed-payload-at-security-defense-expo/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_11_2019&utm_term=2019-07-12)



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### Google's Wing Aviation – its shot at delivering your goods [Josh Spires](#) Jul. 11th 2019



Wing Aviation is taking drone deliveries head-on in Australia, Finland, and the US and is delivering goods **right now** by drone.

[Delivery drones](#) promise deliveries in tens of minutes, leaving current delivery companies behind. High speed and high efficiency are the main benefits drones bring to the delivery

industry, making companies all over the world jump into the space.

Wing Aviation has been in the works for many years under Google X as a development project. In 2018 Wing Aviation became an independent [Alphabet](#) company, making it the eighth project to graduate from Google X. Wing Aviation is developing drone technologies to deliver coffee, small packages, and medicine in Australia as well as working with the Helsinki population to refine their drone delivery solutions.



The company is actively pursuing drone deliveries in Australia and Finland. Opposite ends of the world with totally different weather conditions, making both locations the perfect testing grounds for drone deliveries. It has a testing facility in Northern California and runs operations in Virginia.

Wing is actively taking part in the FAA's IPP and UPP programs in **Virginia**. In a recent announcement, the FAA has [granted Wing Aviation](#) the **first** approval to commence drone deliveries around the United States. In Australia, Wing Aviation has been working with residents for over eighteen months to develop a viable and effective way to deliver packages. Wing Aviation has chosen to test in Canberra, Australia. The company also moved into Helsinki, Finland in the spring of this year, taking on the harsh cold weather, and creating a perfect testing ground for Wing Aviation's delivery drones. <https://dronedj.com/2019/07/11/project-wing-aviation-googles-delivering-goods/#more-17190>