



## UAS and SmallSat Weekly News

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### New TigerShark UAS Expands Capabilities of MSU's Raspet Flight Research Laboratory March 6, 2019 News



Mississippi State University's Raspet Flight Research Laboratory is expanding its unmanned aerial systems research and support capabilities with the acquisition of **two** of the latest TigerShark XP3 aircraft.

The two aircraft—built by NAVMAR Applied Sciences Corporation—along with associated radio and computer equipment, represent a total investment of **\$2 million**. The cost is covered in part by grant funding from federal research projects aimed at making UAS safer.

They are capable of sustained flight for **8-12 hours** without refueling. When we're doing work like disaster relief support, those hours become critical. Every minute in the air is a minute you might be able to find someone that needs medical assistance or evacuation.

They can carry nearly 100 pounds of payload including sensors that can examine agricultural crop health or the status of critical infrastructure such as bridges and levees. Brooks said his team now can use one UAS to monitor erosion and, at the same time, test the ability of a UAS to orbit over a disaster area and function as a temporary cell

tower. <https://uasweekly.com/2019/03/06/new-tigershark-uas-expands-capabilities-of-msus-raspet-flight-research-laboratory/>

### Is drone geo-fencing software too easy to hack? March 6, 2019 Feilidh Dwyer



Drone producers, such as Chinese giant DJI, sell UAVs with [inbuilt geo-fencing software](#) which creates 'virtual walls' stopping craft from entering restricted air space near airports or military bases.

[The Sun](#) (not the most reliable news source, I know) interviewed several engineers who work on software cracking websites and they say that anyone can download a patch and install it on their drone which instantly renders the geo-fencing software useless.



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Incidences of drones flying near airports are the primary reason manufacturers such as DJI have installed geo-fencing software on their drones.

The engineers behind websites such as NoLimitDronex decided to remain **anonymous** but told The Sun that they did not agree with manufacturers imposing arbitrary restrictions on where they can

and cannot fly. [https://www.wetalkuav.com/is-drone-geofencing-software-too-easy-to-hack/?utm\\_source=WeTalkUAV&utm\\_campaign=2cc7ac39e2-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email&utm\\_term=0\\_1d410cb84d-2cc7ac39e2-83642867](https://www.wetalkuav.com/is-drone-geofencing-software-too-easy-to-hack/?utm_source=WeTalkUAV&utm_campaign=2cc7ac39e2-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_1d410cb84d-2cc7ac39e2-83642867)

### Benefits of using drones at airports [Haye Kesteloo](#) Mar. 6th 2019



There is an opportunity for drones to offer substantial benefits at airports, even though it would require “risk management and extensive permissions”. Toby Townrow, Co-Founder and Communications Director of [Drone Evolution](#), informs us that drone tests are currently being conducted at Manchester Airport. He then continues to list the benefits that the use of drones can bring to airports.

**Runway Integrity Surveys** – Drones could be used to provide 3D maps of runways in a very short space of time for routine maintenance to a very high accuracy level.

**Perimeter Security** – Drones can be used to provide support to manned guarding via a control center to react to threats quickly and act as a visual deterrent. Tethered drones can stay in the air for extended periods as opposed to the 20 to 30 minutes currently afforded by their free flying cousins.

**Foreign Object Detection** – Drones can be used for aerial detection of foreign objects, alleviating the need to shut down a runway to do it by eye (as is currently the practice).

**Building Surveys** – Like runways, drones can be used to provide aerial surveys of terminal buildings for routine maintenance. This is much safer than sending people up ladders – and quicker too. <https://dronedj.com/2019/03/06/benefits-using-drones-at-airports/>



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### How to Get a Waiver for Flight over People: ParaZero Meets New ASTM

**Standards** Miriam McNabb March 07, 2019



Now that the FAA has opened the door – if only narrowly – to flight over people, drone pilots are getting ready to apply for waivers.

Israeli company [ParaZero](#) is one of the players providing **proven** safety solutions. With a sophisticated drone safety system that includes a parachute, ParaZero is enabling safe and legal flights over people. The [SafeAir Phantom System](#) is a smart parachute system that monitors UAS flight in real time, identifies critical failures and autonomously triggers a parachute, a flight termination system and an audio-warning buzzer.



For the past 18 months, ParaZero has worked with the FAA and partners including DJI to create a standard for drone parachutes appropriate for flight over people. That standard – (ASTM F3322-18) – was released in September 2018 and defines the requirements for the design, manufacturing and testing of sUAS parachute systems.

With ParaZero’s SafeAir System on a DJI Phantom 4, North Dakota UAS operator, Botlink, was able to secure the **first ever** FAA waiver for flight over people.

<https://dronelife.com/2019/03/07/how-to-get-a-wiaver-for-flight-over-people-developing-parazero-meets-new-astm-standards/>

### Pure AirMagic: This Award-Winning Photo Editing Company Now Makes Software for Your

**Drone** Harry McNabb March 07, 2019



Professional drone operators are responsible for providing their clients with high-quality images – but they don’t always want to invest in expensive software and spend hours doing painstaking editing.

Introducing [AirMagic](#) – Skylum’s new, AI-powered editing software designed specifically for aerial photography. It is the **world’s first** automated AI-powered enhancer for Mac & PC created for drone and aerial photography. It’s inexpensive, easy to use, and results in amazing images - all through the power of algorithms and artificial intelligence.



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### AirMagic

With a one-click interface, it first detects the drone camera, analyzing its lens and color profile. It makes automatic lens corrections and other optimizations. "It uses algorithms and Artificial Intelligence to evaluate each photograph, applying modifications such as color reveal, haze removal, sky enhancement and other adjustments to make each photo look just as it was intended."

<https://dronelife.com/2019/03/07/pure-airmagic-this-award-winning-photo-editing-company-now-makes-software-for-your-drone/>

### Herding sheep with a drone that barks like a dog Haye Kesteloo Mar. 8th 2019



Farmers in New Zealand are now herding sheep with a drone, the [DJI Mavic 2 Enterprise](#), outfitted with a speaker that barks like a dog. The farmers say that a single drone can do the work of multiple dogs. Check out the video below for the drone in action and some of the other sounds effects the farmers use.

The farmers use the [DJI Mavic 2 Enterprise](#) drone that can be outfitted with a speaker and play pre-recorded sounds such as the bark of a dog. Or a siren or anything else that might persuade the livestock to get moving. Watch the video for some interesting ones.

One Shepherd, Corey Lambeth, told Radio New Zealand that drones are surprisingly effective. *"That's the one thing I've noticed when you're moving cows and calves that the old cows stand up to the dogs, but with the drones, they've never done that," he said. He later added that the drones move livestock **faster, and with less stress** than the dogs do.*

For comparison, a **2-hour** herding job that generally requires two people and two teams of dogs can now be done in only **45 minutes** using a single drone.

Rentoul continued to say that some **dogs** are already learning to **work together with the drones**. *"A good herding dog, he's already figured out if the drones are working on that side, I'll go over here [to the other side]," he said.*

The use of drones to herd the sheep doesn't replace the dogs altogether. Obviously, dogs can keep going for much longer than the typical 20 minutes that a drone can stay airborne. Furthermore, dogs can work in inclement weather conditions when drones cannot.

<https://dronedj.com/2019/03/08/herding-sheep-with-a-drone/>



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### Thales and Vodafone join National BVLOS Experimentation Corridor APPLICATION

BUSINESS NEWS UK ALEX DOUGLAS MARCH 8, 2019



Becoming the third and fourth companies in the partnership, they join founding partners Cranfield University and Blue Bear Research Systems. It will examine the impact of digital transformation to jointly develop and exploit innovations within and between digitized airline operations, aircraft, airspace management and airports that are already in use.

The flight corridor will be used to demonstrate **how 4G and 5G mobile technology** can be used to identify and **track the location of a drone in real time**, a move which they feel is vital to ensure that autonomous BVLOS flights are safe.

Steve Murray, vice president for strategy & marketing at Thales UK, said: "Our solutions will help to build the foundations for an **entirely new** air transport system, based on clean, electric and hybrid air vehicles. "For example, this will enable the routine, safe and secure use of drones for infrastructure surveillance and inspection, logistics delivery services and a future in which urban air mobility is a reality. Digital Trust is at the core of all we do, and our role in the project will contribute significantly in the areas of cyber security and the concept of centralized management for UAV traffic management to ensure the safety and security of the airspace."

[https://www.commercialdroneprofessional.com/thales-and-vodafone-join-national-bvlos-experimentation-corridor/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-294558-Commercial+Drone+Professional+DNA+-+2019-03-09](https://www.commercialdroneprofessional.com/thales-and-vodafone-join-national-bvlos-experimentation-corridor/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-294558-Commercial+Drone+Professional+DNA+-+2019-03-09)

10Mar19

### Trump admin removes policy requiring transparency over civilian drone deaths

March 9, 2019 Feilidh Dwyer



On March 6, Trump signed an executive order revoking the requirement for intelligence agencies to publicly announce the number of non-combatants killed by US drone strikes or other attacks on terrorist targets outside of war zones.

The justification for this move is that Congress has already passed new legislation on the reporting of civilian casualties, and Obama's executive order is therefore redundant.



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The problem with that argument is that the Congressional legislation only requires reporting on civilian deaths for *military operations*. Many US drone strikes occur in non-military zones. This means that should there be a US assassination attempt on, say, a Pakistani warlord, and the Hellfire missile accidentally kills 20 women and children, the Trump administration will be under no obligation to make that information known to the public.

<https://www.wetalkuav.com/trump-drone-death-regulations/>

**11Mar19**

**Air Force Tests New Autonomous Flight Test System** Nichols Martin March 8, 2019 News, Technology



The U.S. Air Force 412th Test Wing performed a **three-day flight trial** for a new system designed to facilitate autonomous aircraft testing.

The Testing of Autonomy in Complex Environments system, developed by Johns Hopkins University, establishes links between an aircraft on auto pilot and an artificial intelligence computer. The computer sends autonomous commands to the aircraft that TACE gathers status information from.

"Today we had an autonomous algorithm commanding the aircraft without any direct human involvement," said Capt. Riley Livermore. The system is intended to regulate autonomy commands and allow the aircraft to observe simulations. The team tested the TACE payload with a Swift Radio Planes-made Lynx small unmanned aircraft system. "TACE controls what the autonomy computer sees and can manipulate that information to allow simulated entities to influence its decision making."

The test unit plans to perform another test within the next two weeks and proceed to trials with larger unmanned aircraft units in the summer. <https://www.executivegov.com/2019/03/air-force-tests-new-autonomous-flight-test-system/>

**DRONEII: Tech Talk – Unraveling 5 Levels of Drone Autonomy** Miriam McNabb March 11, 2019

**DRONEII.COM** *Guest Post: This article published with permission from Drone Industry Insights. Article authored by Millie Radovic.*  
**DRONE INDUSTRY INSIGHTS**

The best way to understand the autonomy of drones is as a spectrum. If autonomy is a measure of independence from external influence and the level of self-governing, then different



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platforms can be autonomous but on a different point in the autonomy spectrum. The key is to understand these different levels and what they look like in practice in the drone industry.

DRONE INDUSTRY INSIGHTS

### THE 5 LEVELS OF DRONE AUTONOMY

Autonomy Level	Level 0	Level 1	Level 2	Level 3	Level 4	Level 5
Human Involvement						
Machine Involvement						
Degree of Automation	No Automation	Low Automation	Partial Automation	Conditional Automation	High Automation	Full Automation
Description	Drone control is 100% manual.	Pilot remains in control. Drone has control of at least one vital function.	Pilot remains responsible for safe operation. Drone can take over heading, altitude under certain conditions.	Pilot acts as fall-back system. Drone can perform all functions 'given certain conditions'.	Pilot is out of the loop. Drone has backup systems so that if one fails, the platform will still be operational.	Drones will be able to use AI tools to plan their flights as autonomous learning systems.
Obstacle Avoidance	NONE	SENSE & ALERT		SENSE & AVOID		SENSE & NAVIGATE

Source: DRONEII.com | Date: March 12<sup>th</sup> 2019 | DRONEII.COM | DRONE INDUSTRY INSIGHTS | Hamburg, Germany | www.droneii.com

<https://dronelife.com/2019/03/11/droneii-tech-talk-unraveling-5-levels-of-drone-autonomy/>

12Mar19

### FAA awards Flirtey and City of Reno approval for BVLOS drone delivery

APPLICATION BUSINESS FAA NEWS REGULATION UNITED STATES ALEX DOUGLAS on MARCH 11, 2019



The new approval will enable Flirtey to conduct drone delivery operations with a pilot controlling the flights from a remote location.

The next-gen drone, designed to carry heavier payloads for longer distances, has received the approval allowing delivery of Automated

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External Defibrillators and commercial packages.

As one of just 10 selected governments for the FAA's Unmanned Aircraft Systems Integration Pilot Program, the City of Reno chose Flirtey as its partner to deliver AEDs for the immediate treatment of a person experiencing cardiac arrest and to pioneer a scalable model for commercial drone delivery. [https://www.commercialdroneprofessional.com/faa-awards-flirtey-and-city-of-reno-approval-for-bvlos-drone-delivery/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-294677-Commercial+Drone+Professional+DNA+-+2019-03-11](https://www.commercialdroneprofessional.com/faa-awards-flirtey-and-city-of-reno-approval-for-bvlos-drone-delivery/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-294677-Commercial+Drone+Professional+DNA+-+2019-03-11)

### **Satellites from Virginia universities will launch in April** 11March 2019, AP

WALLOPS ISLAND, Va. (AP) — Three small satellites that were developed at public universities in Virginia will be lifting off into space next month. Old Dominion University in Norfolk said in a press release that the satellites will be aboard Northrop Grumman's Antares launch to the International Space Station. Liftoff is scheduled for April 17 from NASA's **Wallops Flight Facility** on Virginia's Eastern Shore.

Astronauts aboard the station will then put the devices in orbit. The satellites will collect measurements of the earth's atmosphere to help accurately predict orbits for small satellites. The measurements will also provide a better understanding of how space weather affects the devices.

The schools that are involved are Hampton University, Old Dominion, the University of Virginia and Virginia Tech. They're part of what's called **The Virginia Cubesat Constellation** mission. <https://apnews.com/02235903c6ac4103a34b0179a5e560e4>

### **Unify unveils e-identification and tracking for drones** APPLICATION EUROPE HEADLINE NEWS NEW PRODUCTS TECHNOLOGY ALEX DOUGLAS MARCH 12, 2019



Introducing the solution at the World ATM Congress in Madrid, Unify described how the device works completely independently.

It is ready to use once attached to a drone and has its own power source and sensors for position, altitude, temperature, pressure, speed and direction.

The Unify BLIP (broadcast location & identity platform) is tailored to the specific needs of UTM service providers and local authorities. When senses vertical movement, it automatically starts sending tracking data over the LTE wireless broadband network to the UTM backbone. It also



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broadcasts the drone's e-identification, 3D location and take-off position over Bluetooth Low Energy.

The information can be accessed in real-time by relevant authorities through secured applications and allows a police patrol to read out all details of drones flying within a distance of up to 200 meters of the patrol's position.

In combination with the Unify UTM platform, the firm hopes BLIP can provide a complete solution for authorities to identify and track drone traffic in their area of responsibility, **independent** of the systems used by the drone operators.

[https://www.commercialdroneprofessional.com/unify-unveils-e-identification-and-tracking-for-drones/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-294797-Commercial+Drone+Professional+DNA++2019-03-12](https://www.commercialdroneprofessional.com/unify-unveils-e-identification-and-tracking-for-drones/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-294797-Commercial+Drone+Professional+DNA++2019-03-12)

## Echodyne MESA Radar Selected for Counter-UAS Solutions 12 Mar 2019 Mike Rees



[Echodyne](#) has announced that its security radar, EchoGuard, has been selected by [Black Sage Technologies, Inc.](#) as the preferred radar sensor for mid-range C-UAS (counter unmanned aerial system) security solutions.

The company's patented technology delivers a high-performance radar in a compact, solid-state format for security integrators delivering multi-sensor ground and airspace security solutions. When integrated into multi-sensor arrays it cues other sensors for rapid object identification and potential mitigation.

[https://www.unmannedsystemstechnology.com/2019/03/echodyne-mesa-radar-selected-for-counter-uas-solutions/?utm\\_source=Unmanned+Systems+Technology+Newsletter&utm\\_campaign=9fa3010ddb-eBrief\\_2019\\_Mar\\_12&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-9fa3010ddb-119747501](https://www.unmannedsystemstechnology.com/2019/03/echodyne-mesa-radar-selected-for-counter-uas-solutions/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=9fa3010ddb-eBrief_2019_Mar_12&utm_medium=email&utm_term=0_6fc3c01e8d-9fa3010ddb-119747501)

## Drone Investments Report 2019



### Highlights

- Since 2008, **\$3,163B** have been invested into drone companies
- 2018 was yet another record year with **\$702 million total invested** through **159 investment deals**
- Since 2014, the total and annual global investment value has been growing at a constant level of **23% CAGR**

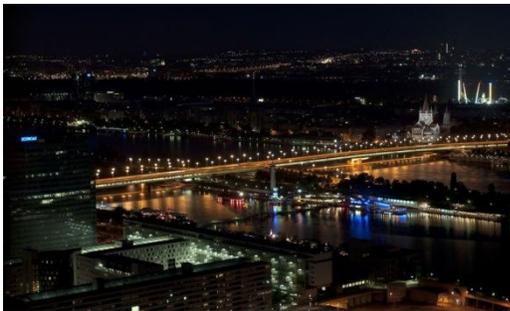
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- In the period of **2016-2018** the drone industry experienced **70** mergers and acquisitions.
- The steady rise of investments into **counter drone technology** is expected to continue, especially as drone security issues gained prominence in late 2018 and early 2019.
- Choose from 3 different **tailor-made** packages according to your company stage (start-up, SME and large enterprise/investor). <https://www.droneii.com/project/drone-investments-2019>

### **Altitude Angel Announces Austria Expansion Plans** Malek Murison March 12, 2019



UK aviation company and UTM provider [Altitude Angel](#) is expanding operations and opening an office in Vienna, Austria. The move appears to be a step to **mitigate any issues caused by the UK's planned departure from the European Union.**

The new office opening represents the first step in Altitude Angel's international expansion, as it strengthens its portfolio of partners and projects across the globe, which includes Frequentis, DJI and the FAA's LAANC program.

Recently, Altitude Angel worked alongside DJI and a number of other parties in [UTM testing](#) during Operation Zenith at Manchester Airport, England. Altitude Angel has also partnered with DJI to [support the rollout of GEO 2.0 across Europe.](#)

On the international expansion, Richard Parker, Altitude Angel, CEO and founder, [said](#): "Our European partners will now have a hub on their doorstep to manage their requirements in an effective manner, regardless of what happens in the political landscape."

Altitude Angel's airspace management platform, GuardianUTM O/S, is a software platform which enables national deployments of [U-space](#) compatible services. The company's aim is to safely unlock the potential of drones through assisting national aviation authorities and air navigation service providers with establishing services to support drone industry growth. <https://dronelife.com/2019/03/12/altitude-angel-announces-austria-expansion-plans/>

**13Mar19**

**New mind control drone headset available to the masses on Kickstarter** March 12, 2019 Feilidh Dwyer



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Chinese company EEGSmart has developed brain-machine interface technology which they intend to market to the masses through their UDrone mini-quad and UMind Lite headset.

The UDrone is a small, lightweight craft with 2-inch props and comes equipped with an 8 megapixel, 1080p capable camera. It comes with face-tracking and gesture recognition and can stay airborne for around **7 minutes**. The headset has multiple inbuilt sensors which measure your brain's electrical activity, as well as eye movements and response to your nerve's stimulation of muscles. The device also has gyros and accelerometers, and patented gear built in to amplify signal and squash noise from the finicky brain and nerve sensors."

You can watch the video of his test below. The video shows the tester tilting his head as the drone moves from side to side and up and down. As with similar mind-controlled drones, to get it to take off, you have to really concentrate and empty your mind. This is the most difficult part of the flight. Once in the air, you can move your head left or right and the drone will follow your movements. If you blink twice it will take a photo and a clench of your jaw will cause the drone to come in to land.

By itself, the drone costs \$150 and with the headset controller included, its \$282. Udrone is looking to raise the rather humble sum of \$4,968 within 45 days. They plan to have the orders ready to be delivered by April 2019. You can read New Atlas's full review of the UDrone mini-quad and UMind Lite headset here. [https://www.wetalkuav.com/you-can-own-a-mind-controlled-drone/?utm\\_source=WeTalkUAV&utm\\_campaign=3969e00687-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email&utm\\_term=0\\_1d410cb84d-3969e00687-83642867](https://www.wetalkuav.com/you-can-own-a-mind-controlled-drone/?utm_source=WeTalkUAV&utm_campaign=3969e00687-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_1d410cb84d-3969e00687-83642867)

**Drones that perch like birds could go on much longer flights** Erin Winick March 13, 2019



Just as a bat might cling to a wall or a bird perch on a branch to rest, drones can also take an energy-saving break by grasping onto something.

Sign Up

The new drone has a gripper that lets it grab onto anything smaller than its opening width, like branches, signs, or lights. The team outfitted the drone with three controllable fingers tipped



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with “contact modules” that let it mimic the perching styles of different animals, such as bats or birds of prey.

For example, by hooking one of its sides onto an edge, the drone can switch off two propellers, using about 45% less energy. It can also grasp a rod to hang upside down like a bat, allowing all the rotors to be shut off. Or it can even rest on a stick, which—although the propellers would need to stay on—uses about 69% less energy than hovering.

Giving drones grip can also enable greater lifting strength and safer interactions with humans. “Once an unmanned aerial vehicle is perched, it will be able to lift dramatically larger loads without requiring any power from the rotors,” says Hang.

<https://www.technologyreview.com/s/613108/drones-that-perch-like-birds-could-go-on-much-longer-flights/>

### Quaternium Technologies Launches The HYBRiX POLICE UAV March 12, 2019 News



HYBRiX drone, **the first hybrid fuel-electric multirotor**, with 10 times more flight time than electric drones, takes off. This innovative project from [Quaternium](#) attracted a lot of attention after setting the **World Record** of Endurance in 2017 with a **4 hr. 40 min.** flight.

The setting of HYBRiX POLICE UAV includes an advanced EO/IR camera with 30x zoom on a three-axis gimbal, and a transponder system to coordinate with Air Traffic Control Authorities. It will be possible to detect a fire, or even a missing person at night, thanks to the infrared sensor of the camera. With this new technology, it will be possible to provide a fast response to emergencies even at night.

To make this possible, the City Hall of Benidorm, through the Council of Citizen Security, has developed a Local Regulation for Police Aerial Operations in the City, in collaboration with the Polytechnic University of Valencia. The acquisition of the drone by the city and the upcoming First Response pilot was presented last week at Civil Drone in Madrid, generating high expectation. <https://uasweekly.com/2019/03/12/quaternium-technologies-launches-the-hybrix-police-uav/>

14Mar19

### Trump’s 2020 Budget Provides Funding to Marines for MQ-9 Reaper Drones

Darwin McDaniel March 13, 2019 News, Technology



The U.S. Marine Corps secured \$45.9 billion from President Trump’s proposed 2020 budget a figure that will support the acquisition of the

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service's first fleet of MQ-9 Reaper drones, National Defense Magazine [reported Tuesday](#).

The Marines' budget for the next fiscal year is \$2.7 billion higher than its 2019 level and includes \$3.1 billion for acquisition of new technologies. Trump allocated \$77 million for the procurement of **three new MQ-9 drones**.

Rear Adm. Randy Crites, deputy assistant secretary of the Navy for budget, said the drone can "fulfill an urgent operational need for the marines as we intend to transition this as a program of record once we complete the program evaluation process." <https://www.executivegov.com/2019/03/trumps-2020-budget-provides-funding-to-marines-for-mq-9-reaper-drones/>

**DJI Declares Transport Canada Compliance for Nine Drones** Betsy Lillian March 13, 2019



DJI has announced that nine of its drone models comply with the latest Transport Canada regulations for advanced drone operations **in controlled airspace**.

Transport Canada [announced its new regulatory framework](#) for certain types of advanced civilian drone operations in January, requiring the use of drones whose manufacturer has declared compliance with reliability and operational characteristics under a safety assurance framework. DJI's compliant drones are the M600 Series, M200 Series, M200 V2 Series, Inspire 2, Mavic 2 series, Mavic Pro, Mavic Air, Phantom 4 series and Spark.

"A self-declaration compliance regime is yet another innovative approach by Transport Canada to lead the way in enhancing safety while integrating advanced operations," says Javier Caina, DJI's director of technical standards. "Allowing manufacturers to declare their equipment compliant with requirements and standards is preferable to requiring an aviation authority to certify each product.." [https://unmanned-aerial.com/dji-declares-transport-canada-compliance-for-nine-drones?utm\\_medium=email&utm\\_source=LNH+03-14-2019&utm\\_campaign=UAO+Latest+News+Headlines](https://unmanned-aerial.com/dji-declares-transport-canada-compliance-for-nine-drones?utm_medium=email&utm_source=LNH+03-14-2019&utm_campaign=UAO+Latest+News+Headlines)

**Pix4D to host first ever user conference** APPLICATION NEWS TECHNOLOGY ALEX DOUGLAS MARCH 14, 2019



Set to be held in **Denver, Colorado** on October 2 and 3, drone and **GIS enthusiasts** have been invited for discussion on surveying, mapping and drone tech and how it can be used in real world

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settings. The lineup of user stories has been described as highlight of the conference.

Nikoleta Guetcheva, head of marketing at Pix4D commented: "Because great ideas don't always happen inside the office, the Pix4D User Conference offers all attendees multiple possibilities to connect with peers and the Pix4D team over the course of the event."

As well as discussion and tips shared by users and product experts, Pix4D training will be offered. [https://www.commercialdroneprofessional.com/pix4d-to-host-first-ever-user-conference/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-295096-Commercial+Drone+Professional+DNA+-+2019-03-14](https://www.commercialdroneprofessional.com/pix4d-to-host-first-ever-user-conference/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-295096-Commercial+Drone+Professional+DNA+-+2019-03-14)

### **SenseFly unveils eBee X with MicaSense RedEdge-MX** AGRICULTURE APPLICATION BUSINESS INTERNATIONAL NEW PRODUCTS NEWS TECHNOLOGY ALEX DOUGLAS MARCH 14, 2019



Gilles Labossière, CEO of senseFly, explained: "We know from agricultural customers such as agronomists, crop consultants and researchers that high-resolution crop data is key to effective analysis and decision making." The RedEdge-MX is a multispectral sensor and can capture red, green, blue, near-infrared, and red-edge spectral bands. Data from the sensor can then be used to generate true color composites, basic crop health indexes, and analytical tools like flower identification and weed detection.

Eric Waters, general manager of MicaSense said: "Customers now have a quicker, more efficient way to analyze the health of their crops without having to compromise on data quality." The senseFly eBee X with MicaSense RedEdge-MX is available for purchase now via senseFly distribution partners and is priced at **\$19,800**.

[https://www.commercialdroneprofessional.com/sensefly-unveils-ebee-x-with-micasense-rededge-mx/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-295096-Commercial+Drone+Professional+DNA+-+2019-03-14](https://www.commercialdroneprofessional.com/sensefly-unveils-ebee-x-with-micasense-rededge-mx/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-295096-Commercial+Drone+Professional+DNA+-+2019-03-14)

### **What is Remote ID and How Will It Define the Future of the Airspace?** Jeremiah Karpowicz March 13, 2019



A new [whitepaper from the Kittyhawk team](#) explains not only what it would mean to enable this kind of transparency in the airspace with a Remote ID system, but also details the significance of doing so for the present and future of the technology and society as a whole.



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Download the [Remote ID & Commercial Drones](#) for free

Referring to Remote ID as a “digital license plate for drones,” the whitepaper explains in detail why this concept is going to be so incredibly relevant for the commercial drone industry and how it will ultimately enable urban air mobility.

“There’s a perception that Remote ID is going to mean a loss of liberty when in reality, this is a very necessary component for the industry to move forward,” said Kittyhawk founder Joshua Ziering. “Ultimately, our customers are clamoring for this. They’re looking for a way to demonstrate that they’re operating responsibly and according to the regulations. Remote ID is something that’s going to make everyone better.”

The benefits of Remote ID are broken out into five specific areas in the whitepaper, with each detailing the distinct value of the solution as they relate to current challenges that range from regulation to operation to public trust. [https://www.expouav.com/news/latest/remote-id-future-airspace/?mkt\\_tok=eyJpIjoiWmpFM09USmpZVGxsWm1RMCIlnQoiJDT2VhYXBza0s2OXVBCzhHc0F1WnFcl0pkZitRT1wvNkFvZGJGV2V0UINZdVBzcVFid3orUmNET2hLXC94XC9haFhVU3UxSU40MzRldm1RMWRJVnZ4OVpLcFpReWdONk05clZFbnNWYkFIMGxWTDcxbWlsc29XSjA2a3ZMY3FMamNNY1AifQ%3D%3D](https://www.expouav.com/news/latest/remote-id-future-airspace/?mkt_tok=eyJpIjoiWmpFM09USmpZVGxsWm1RMCIlnQoiJDT2VhYXBza0s2OXVBCzhHc0F1WnFcl0pkZitRT1wvNkFvZGJGV2V0UINZdVBzcVFid3orUmNET2hLXC94XC9haFhVU3UxSU40MzRldm1RMWRJVnZ4OVpLcFpReWdONk05clZFbnNWYkFIMGxWTDcxbWlsc29XSjA2a3ZMY3FMamNNY1AifQ%3D%3D)

## Integrating and Understanding UAVs in Public Safety at the UAS DRONES

**Disaster Conference | Los Angeles** Jeremiah Karpowicz March 14, 2019



What is the primary objective of disaster recovery? How do public safety officials approach situations that range from routine police calls to wildfires? At the conference, public safety officials explored what it has and will mean to use drones when doing so in a variety of emergency situations.

The Chula Vista Police Department has integrated drones in their SOP’s that has led to their being able to make a real difference in how they respond to calls. They’re able to use the drone in a proactive way, rather than a reactive one.



*Chula Vista PD Captain Vern Sallee on the far right of the panel.*

“You’ll typically have your least experienced officers sent into the most uncertain or dangerous situations,” said Chula Vista PD Captain Vern Sallee. “Using the drone, those offices can receive advice from more experienced members of our department.”



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A video showcased how the Torrance Police Department used their drone to keep track of a suspect that was jumping through backyards during a police pursuit. The drone worked in unison with the helicopter. That suspect was monitored to the point where a police dog could be used to apprehend the suspect. Another video showed the drone finding a suspect who gave himself up as soon as he saw the drone.

The Torrance PD drone has been deployed to monitor for shark activity and inspect a radio tower. [https://www.expouav.com/news/latest/uavs-public-safety-drones-disaster-conference/?mkt\\_tok=eyJpLjoiWmpFM09USmpZVGxsWm1RMCIiInQioiJDT2VhYXBza0s2OXVBCzhHc0F1WnFCL0pkZitRT1wwNkFvZGJGV2VOUINZdVBzcVFid3orUmNET2hLXC94XC9haFhVU3UxSU40MzRldm1RMWRJVnZ4OVpLcFpReWdONk05clZfbnVWYkFiMGxWTDcxbWlsc29XSjA2a3ZMY3FMamNNY1AifQ%3D%3D](https://www.expouav.com/news/latest/uavs-public-safety-drones-disaster-conference/?mkt_tok=eyJpLjoiWmpFM09USmpZVGxsWm1RMCIiInQioiJDT2VhYXBza0s2OXVBCzhHc0F1WnFCL0pkZitRT1wwNkFvZGJGV2VOUINZdVBzcVFid3orUmNET2hLXC94XC9haFhVU3UxSU40MzRldm1RMWRJVnZ4OVpLcFpReWdONk05clZfbnVWYkFiMGxWTDcxbWlsc29XSjA2a3ZMY3FMamNNY1AifQ%3D%3D)

## New Drone Measures Come Into Force As UK Expands Airport No-Fly Zones Malek Murison March 13, 2019



The UK Government is today putting into place new legislation that will **extend no-fly zones** around airports **to 5km**. There is also a promise to impose major penalties for those who break the law.

The government decided to bring in the changes before the new Drones Bill has been finalized, in part as a reaction to the events at [Gatwick airport](#) before Christmas.

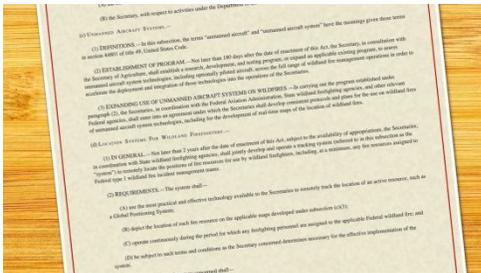
Penalties for breaking the law on misusing drones range from fines **to life imprisonment** if the device is intentionally used to cause violence.



Drone users can only fly within the restriction zones if they have the correct permission from air traffic control or the airport.

<https://dronelife.com/2019/03/13/new-drone-measures-come-into-force-as-uk-expands-airport-no-fly-zones/>

## New U.S. law pushes use of drones to fight wildfires Haye Kesteloo Mar. 14th 2019



Last Tuesday, President Trump signed a bipartisan bill that pushes federal agencies to start using drones to fight wildfires. The details are described in Sec. 1114, titled **“Wildfire technology modernization”** of the [John D. Dingell, Jr. Conservation, Management, and Recreation Act](#). Not only is this new law good for the use of drones in fighting wildfires, but it may also help the



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use of unmanned aircraft in other industries, such as deliveries by drone, search and rescue missions, and the use of drones for agriculture, inspection and construction.

The Act requires the secretary of the Department of the Interior to: *“Establish a research, development, and testing program, or expand an applicable existing program, to assess unmanned aircraft system technologies, including optionally piloted aircraft, across the full range of wildland fire management operations to accelerate the deployment and integration of those technologies into the operations of the Secretaries.”*

You can read all the details of the new law [here](#). Simply search for the word ‘unmanned’ and you will jump to the right section.

DroneDJ’s take on the use of drones to fight wildfires: It is very exciting to see a new law that requires federal agencies to explore the use of [drones for good](#). Multiple drones can help to quickly monitor large areas of land and map the locations of wildfires, helping to keep the fires under control and keep people safe.

This new law will put even more pressure on the FAA and other agencies to develop the regulation needed to allow for flying unmanned aircraft beyond-line-of-sight, at night, delivering medication, medical samples, [organ deliveries](#), packet deliveries, search-and-rescue missions and the use of drones for agricultural, inspection and construction purposes.

<https://dronedj.com/2019/03/14/law-pushes-drones-fight-wildfires/#more-15616>

### **ParaZero SafeAir parachute system tested on DJI Phantom** Haye Kesteloo Mar. 13th 2019



With the FAA considering to loosen the regulations for flying drones over people, drone **parachutes** have become of **greater interest** to many drone pilots. Recently we wrote about how [Indemnis Nexus parachute](#) met the strict safety standards. Today, we have two videos that show the ParaZero SafeAir parachute system tested by [Billy Kyle](#) and [Ready Set Drone](#).

Billy Kyle used an already damaged Phantom 4 to perform the parachute test. He shut off the motors on the drone, and after falling a few feet, the parachute system deployed successfully, and the drone came down in a wet grass field with no new damage to the already-damaged drone.

I was a little surprised at how fast the drones came down with the parachute system deployed. However, this safety system is not meant to protect your drone. It is primarily meant to keep

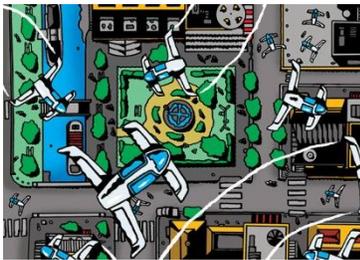


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the people on the ground safe and prevent any injuries from drones falling from the sky. From that perspective, the parachute system performed great. ParaZero SafeAir parachute system is available now for **\$299**. The normal price is \$399. <https://dronedj.com/2019/03/13/parazero-safeair-parachute-system-tested-on-dji-phantom/#more-15606>

15Mar19

### Lilium hopes to soar with launch of electric air taxis Maija Palmer YESTERDAY



It is 2025 and midtown Manhattan is snarled with traffic. But the 19km **journey to JFK airport** — normally about an hour by road — takes just **five minutes** in an electric flying taxi and costs roughly **\$50**. This is not from an episode of The Jetsons. It is the vision that Lilium, a Munich-based start-up, is working towards bringing to the public within **six years**.

The company, founded in 2015 by four engineering students, is developing vertical take-off and landing (VTOL) jets for a fleet of flying taxis that will be as easy to book as an Uber car. “We’re not intending to make it a luxury product that only the rich can afford. We want to make it a service that everyone can use,” says Remo Gerber, Lilium’s chief commercial officer. “It has to be affordable — it shouldn’t be just for the select few. We want it to be truly accessible.”. By 2017 they had developed an unmanned two-seater prototype, called the Eagle, whose maiden flight was broadcast on YouTube.



The company, which employs **300 staff**, is working on a larger five-seater version, which it plans to unveil later this year. Lilium plans not only to build the jets at a factory in Bavaria, but also to operate the air taxi booking service itself. Lilium’s vision is for its five-seater jets to use central urban rooftop landing pads and to be booked with an app.

Lilium has raised about **\$100m** in two funding rounds. We are a ‘deep tech’ solution with a true competitive stance Remo Gerber, Lilium’s chief commercial officer The air taxi market is expected to be worth **\$1.5tn a year by 2040**, according to a report from Morgan Stanley, with passenger traffic comprising \$851bn of that. [https://www.ft.com/content/e0b66e56-1364-11e9-a168-d45595ad076d?FTCamp=engage/CAPI/email/Channel\\_Bulletin//B2B](https://www.ft.com/content/e0b66e56-1364-11e9-a168-d45595ad076d?FTCamp=engage/CAPI/email/Channel_Bulletin//B2B)



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### PrecisionHawk enlisted to hunt jungle treasure left by the Japanese in WWII

APPLICATION by JOE PESKETT MARCH 15, 2019



**The History Channel** has enlisted the help of a UAV pilot equipped with a PrecisionHawk drone to help it find buried treasure left in the Filipino jungle by the Japanese during World War II. The pilot, who was backed up by two data scientists, spent time in the Philippines earlier this year where they flew drones equipped with LiDAR sensors over dense rainforest to map ancient trade paths.

PrecisionHawk was approached by the producers to help them navigate the Filipino rainforests. Using air and ground sensors, including a DJI M600 equipped with a Riegl miniVUX LiDAR sensor and a Sony a6000 camera, the company produced a colorized 3D map of the forest.

The History Channel will air the series premiere of the show **Lost Gold of World War II** next week. Episode 2 will feature visuals generated by PrecisionHawk, as well as interviews with the drone pilot and data scientists involved. [https://www.commercialdroneprofessional.com/precisionhawk-enlisted-to-hunt-jungle-treasure-left-by-the-japanese-in-wwii/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-295236-Commercial+Drone+Professional+DNA+-+2019-03-15](https://www.commercialdroneprofessional.com/precisionhawk-enlisted-to-hunt-jungle-treasure-left-by-the-japanese-in-wwii/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-295236-Commercial+Drone+Professional+DNA+-+2019-03-15)