



UAS and SmallSat Weekly News

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Delair Drives New Trend in Commercial Drone Industry: Subscription-Based Rentals staff July 12, 2019



TOULOUSE, France – July 11, 2019 – Delair today announced Delair Takeoff, a cost-effective subscription program for accessing the company’s high performance family of UAVs and its cloud-based data management solution. Customers can pay a fixed monthly fee and have unlimited use of the long-range, fully equipped drone. A six-month minimum contract is required, and the plan is currently only available to customers in Europe. The program provides a 48-hour drone replacement guarantee in case of an accident, with limited out-of-pocket cost in case of user error or accidental damages.

The Delair UX11 included an embedded global shutter camera, centimeter-level precision GNSS sensor, post processed kinematic capabilities for survey-grade results, and both wireless and cellular connectivity. The drone’s operational performance allows flights of up to 59 minutes covering over 300 acres at 400 feet. The Ag model is custom-built for agriculture and vegetation management and provides the industry’s best grade multispectral data with PPK positioning which enables precise georeferencing for repeatable analysis of individual plants for seed breeding, precision agriculture or range management.

Users can also access delair.ai, a cloud-based platform that helps users manage, process, view, analyze and collaborate. Pricing for starts at €1250/month. Complete pricing information can be found [here](https://dronelife.com/2019/07/12/delair-drives-new-trend-in-commercial-drone-industry-subscription-based-rentals/). <https://dronelife.com/2019/07/12/delair-drives-new-trend-in-commercial-drone-industry-subscription-based-rentals/>

New York State Forms Partnership with Israeli Companies to Build a Drone Industry Center of Excellence Miriam McNabb July 11, 2019



New York Governor Andrew Cuomo recently visited Israel – and came back home having formed partnerships and agreements that will support the state in developing new industries, including drones. New York’s [Empire State Development](#) will offer a \$250,000 planning grant to establish a new Unmanned Aerial Systems Research and Testing Center of Excellence.



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The new center will be led by the [NUAIR Alliance](#), the Northeast UAS Airspace Integration Research organization. NUAIR is “an organizational partner of CenterState COE, the corporation for economic development in the Syracuse/Center State area. [Genius NY](#) is their business accelerator for the drone industry.

All that support and collaboration, from the Governor’s office down, has led to this new **international agreement**. One of the cornerstone tenant companies, [CivDrone](#), was a [2019 Genius NY Team](#): Israeli drone companies [Vorpai](#) and drone delivery company [Flytrex](#) have joined CivDrone in committing to working with NUAIR and the Center of Excellence.

New York and Israeli companies will use the new Center of Excellence to focus on advancing technologies, which will bring Israeli technology and R&D to the New York drone market and open Israeli’s markets to New York State UAS companies. <https://dronelife.com/2019/07/11/new-york-state-forms-partnership-with-israeli-companies-to-build-a-drone-industry-center-of-excellence/>

First Long-Range Drone Delivery Completed in The Bahamas July 11, 2019 News



Volans-i, Inc., an on-demand drone delivery business based in San Francisco, CA, announced today a strategic partnership with Fli Drone, a Hogfish Ventures company, to provide on-demand drone delivery services in The Bahamas. To cement the partnership, the companies successfully completed the **first** long-range unmanned aerial vehicle delivery in The Bahamas on June 18, 2019.

The delivery originated at Abaco Aviation Services, a private FBO at The Leonard M. Thompson International Airport in Marsh Harbour and completed its delivery at Green Turtle Cay in 28 minutes. Previously this same delivery would require transit in both a car and on a ferry. Vertical take-off and landing capabilities allowed the drone to land and safely deliver its payload without any infrastructure required. In total, the fully autonomous flight covered nearly **50 miles, crossing both land and water**.

The flight also marked the first time that a UAV operated in **controlled airspace** at an active commercial international airport outside of emergency operations. Fli Drone was in communication with and is grateful for the support it received from local officials including Marsh Harbour Air Traffic Control.

The Bahamas’ maiden UAV delivery was attended by leaders in the public and private sectors including leaders of the Bahamian government. <https://uasweekly.com/2019/07/11/first-long-range->



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[drone-delivery-completed-in-the-bahamas/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_12_2019&utm_term=2019-07-12](https://www.commercialdroneprofessional.com/cranfield-university-researchers-develop-app-to-turn-off-the-shelf-drones-autonomous/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_12_2019&utm_term=2019-07-12)

Cranfield University researchers develop app to turn off-the-shelf drones autonomous APPLICATION BUSINESS HEADLINE NEWS UK ALEX DOUGLAS JULY 11, 2019



Part of the CASCADE project, its overall aim is to accelerate the exploitation of UAVs across a range of science and industry applications by automating control and facilitating communication between multiple drones so they can work on tasks together.

Alex Williamson, experimental research fellow in UAV Operations in the Centre for Autonomous and Cyber-Physical Systems at Cranfield University, said: “We are initially focusing on demonstrating the benefits that multiple autonomous UAV operations can have within a precision agriculture environment, but alternative use cases are being considered to enable quick spin-off adoption into other applications such as search and rescue.”

The app, designed for Android phones and to work with the majority of DJI drones, receives waypoints via SMS text message, compiles the mission and sends standard off-the-shelf drones on autonomous missions with **no user intervention** required.

Safety features are included within the app to ensure the drone operates within legal requirements, and currently a safety pilot is required to keep the drone within line of sight throughout the mission. Next steps in the project will focus on automating the control of **multiple drones** and technology development that allows UAV operations at extended and **beyond visual line of sight**. https://www.commercialdroneprofessional.com/cranfield-university-researchers-develop-app-to-turn-off-the-shelf-drones-autonomous/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-307106-Commercial+Drone+Professional+DNA+-+2019-07-13

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THIS BIZARRE DRONE SPLITS INTO FIVE MINI-DRONES MID-AIR KRISTIN HOUSER



SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN

Samaras are tiny seed pods with a wing-like shape on one side that causes them to spin as they float to the ground from the branches of tree. As a child you might have tossed them into the air



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yourself, watching as the “whirlybirds” spun out in different directions.

In a new [paper](#) published in the journal *IEEE Robotics and Automation Letters*, researchers from the Singapore University of Technology and Design describe how they created tiny robotic samaras, giving each an actuated flap for a bit of extra navigational control. They then pulled a Voltron, combining five of the mini-drones into one bigger, ceiling fan-shaped drone that’s even easier to control.

In a video, the team demonstrates how it could drop one of these bigger drones from above, guiding its descent until it gets closer to the ground. At that point, the researchers could trigger the drone to break into its five [mini-drones](#), with each heading off in its own direction.

<https://futurism.com/the-byte/bizarre-drone-splits-five-mini-drones-mid-air>

Kellogg’s farmers trial DroneAg’s scouting platform AGRICULTURE APPLICATION

BUSINESS HEADLINE NEWS UK ALEX DOUGLAS JULY 15, 2019



The cereal giant says it wants the partnership with DroneAg to further push boundaries and assess if greater efficiency can be brought into crop analysis and inputs at the farm level using drone technology.

As part of the efforts in the UK, a drone is being shared with a small group of Origins farmers in the Northampton area, and DroneAg’s new software, Skippy Scout, will be put to the test in its final stages of development. The software is currently in a trial phase, and the farmers will be assessing its usability and feeding back images and data to DroneAg to guide future software interaction and to help train the AI to better analyze inputted imagery.

Potential benefits of the trial have been outlined, including more accurate crop data enabling farmers to make informed decisions about crop health and nutrient management.

https://www.commercialdroneprofessional.com/kelloggs-farmers-trial-droneags-scouting-platform/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-307190-Commercial+Drone+Professional+DNA+-+2019-07-15

Private equity firm acquires C-UAS firm Black Sage APPLICATION BUSINESS

INTERNATIONAL NEWS ALEX DOUGLAS JULY 15, 2019



The company, a specialist in development, integration and deployment of C-UAS solutions, identifies, classifies, tracks and defeats UAS threats for military, government, law enforcement, and civil applications.

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Black Sage employs a hardware-agnostic approach to integrating sensors with its proprietary artificial intelligence-enabled target tracking and defense automation systems to provide adaptable C-UAS systems.

Commenting on the acquisition, Rick Nagel, managing partner of Acorn Growth Companies, said: "The acquisition of Black Sage strengthens our already robust defense portfolio of businesses focused on protecting the interests of the United States and its allies."

He added: "Black Sage is truly ahead of its competition in this **highly fragmented space**, already delivering integrated identification and defeat services across the globe. We see significant growth potential for this market segment." https://www.commercialdroneprofessional.com/private-equity-firm-acquires-c-uas-firm-black-sage-%ef%bb%bf/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-307190-Commercial+Drone+Professional+DNA+-+2019-07-15

DroneShield releases 'breakthrough' DroneGun MKIII APPLICATION BUSINESS COUNTER-DRONE INTERNATIONAL NEW PRODUCTS NEWS ALEX DOUGLAS JULY 15, 2019



Designed for one hand operation, the new drone countermeasure is compact and lightweight. It allows for controlled management of drone payloads, such as explosives, with no damage to common drones models or the surrounding environment due to a vertical controlled landing on the spot or returning to the starting point with an immediate cease of

video back to the drone pilot.

RF disruption activation is also expected to interfere with any live video streaming back to the remote controller, halting the collection of video footage and intelligence by the drone operator. It offers up to **500m** coverage and also ensures the drone remains fully intact, allowing for forensic investigation. https://www.commercialdroneprofessional.com/droneshield-releases-breakthrough-dronegun-mkiii%ef%bb%bf/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-307190-Commercial+Drone+Professional+DNA+-+2019-07-15

Singapore to fast track drone registration system following airport intrusion incidents July 15, 2019 Philip Butterworth-Hayes UAS traffic management news



The Singapore Government will introduce a mandatory registration regime for all drones as well as a licensing framework for pilots of large and more

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capable drones, a move prompted by concerns over recent drone intrusions that resulted in several flight delays at Changi Airport.

Announcing this in Parliament on Monday (July 8), Senior Minister of State for Transport Lam Pin Min said that imposing such licensing requirements “will ensure that drone operators are adequately briefed on their responsibilities and that their activities are conducted in a responsible manner”.

Under existing laws, it is an offence to operate drones within 5km of the airport or military bases or to fly drones above 200 ft (61m) without a Class 2 activity permit for recreation or research purposes. Those guilty of doing so face a fine of up to SD20,000, or a jail term of up to 12 months, or both.

On the timeline as to when the mandatory registration will kick in, Dr Lam said the Government hopes that this can be done by the end of this year. He was responding to seven Members of Parliament who asked for updates on the investigation into recent incidents of flight delays at Changi Airport caused by the presence of illegal drones and measures that the Government will take to prevent such incidents from recurring. Dr Lam told the House that over two nights on June 18 and 24, drone intrusions at Changi Airport — the first confirmed intrusions experienced at the airport — led to **55 flight delays and eight diversions**.

<https://www.unmannedairspace.info/latest-news-and-information/singapore-to-fast-track-drone-registration-system-following-airport-intrusion-incidents/>

Exyn Raises \$16M in Funding Round to Advance Autonomous Robot Tech Development [Jane Edwards](#) July 15, 2019



Autonomous robot systems developer [Exyn Technologies](#) has secured \$16 million in a round of Series A financing led by Centricus and backed by [In-Q-Tel](#), Yamaha Motors Ventures, Corecam Family Office, IP Group and Red and Blue Ventures.

Philadelphia-based Exyn [said Thursday](#) it will use the investment to accelerate technology development efforts, build up its client base, develop new offerings and expand its global reach.

The company’s Advanced **Autonomous** Aerial Robots is designed to help users acquire imagery, point clouds, gas readings and other high-value data in **underground mines** and other GPS-denied environments.



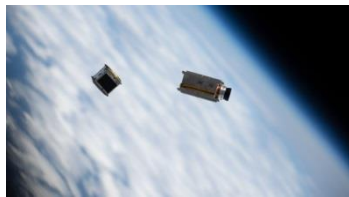
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Exyn CEO Nader Elm said the company has demonstrated the potential of its A3R systems to increase productivity and reduce individuals' exposure to unsafe conditions in the mining industry. "We are only beginning to scratch the surface of how impactful true autonomy will be." The latest round brings the company's total financing to over **\$20 million**.

<https://blog.executivebiz.com/2019/07/exyn-raises-16m-in-funding-round-to-advance-autonomous-robot-tech-development/>

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FCC outlines proposed smallsat licensing rules Caleb Henry July 15, 2019



WASHINGTON — Small satellites that meet certain criteria from the U.S. Federal Communications Commission will be eligible for simpler licensing at roughly **one-fifteenth the cost** of current licenses. Under newly proposed rules, smallsat operators will be able to choose a licensing path for **\$30,000** instead of the \$472,000 fee required today for satellites in non-geosynchronous orbits.

In recent years, low-cost smallsats typically placed in low Earth orbit for missions just a few years long have [surged in popularity](#), creating the need for new regulations. "I see no reason why a satellite **the size of a shoe box, with the life expectancy of a guinea pig**, should be regulated the same way as a spacecraft the size of a school bus that will stay in orbit for centuries," FCC Chairman Ajit Pai said in a July 9 speech. The FCC released the text of the proposed licensing rules July 11. On Aug. 1, FCC commissioners will vote on adopting the measure, which [so far has received praise from satellite industry groups](#).

To qualify for the streamlined licenses, the FCC proposal requires satellites either deploy into orbits below 600 kilometers or carry propulsion systems to deorbit satellites in six years. Eligible satellites have to weigh 180 kilograms or less and need to be 10 centimeters or larger in their smallest dimension. The licenses are also applicable to a maximum of 10 spacecraft at a time. <https://spacenews.com/fcc-outlines-proposed-smallsat-licensing-rules/>

Leonardo's Falco EVO UAS Used To Monitor Irregular Migration During Frontex Operation July 12, 2019 Military News



On the 20th June, Leonardo's Falco EVO tactical remotely-piloted aerial system played a key role in monitoring a case involving irregular migrants in the Mediterranean as part of monitoring

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activities of Frontex, the European Border and Coast Guard Agency. In an operation launched from the Italian island of Lampedusa, the aircraft worked with other Frontex assets to identify a “mothership” trawler as 81 illegal migrants were transferred to smaller boats, a technique increasingly used by criminal organizations. Following the transfer, the Falco kept a close eye on the trawler until an enforcement operation was launched by Italian authorities to seize the boat.

The Falco EVO system deployed at Lampedusa Airport has flown for more than 280 hours on behalf of Frontex, with one mission on the 26th June clocking in at **17 hours** and 21 minutes. . https://uasweekly.com/2019/07/12/leonardos-falco-evo-uas-used-to-monitor-irregular-migration-during-frontex-operation/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_15_2019&utm_term=2019-07-15

US Navy’s MQ-8C Unmanned Helicopter Reaches Initial Operational Capability

July 14, 2019 Military



MQ-8C Fire Scout, the US Navy’s new unmanned helicopter, has reached initial operational capability (IOC) after some **six years** of flight trials. The navy declared IOC on June 28, after the MQ-8C clocked in over 1,500 flight hours with more than 700 sorties.

The sea-based, vertical lift unmanned system is designed to provide reconnaissance, situational awareness, and precision targeting support for ground, air and sea forces. “This milestone is a culmination of several years of hard work and dedication from our joint government and industry team,” said Capt. Eric Soderberg, Fire Scout program manager. “We are excited to get this enhanced capability out to the fleet.”

The Northrop Grumman-built Fire Scout complements the manned MH-60 helicopter by extending the range and endurance of ship-based operations. It provides unique situational awareness and precision target support. https://uasweekly.com/2019/07/14/us-navys-mq-8c-unmanned-helicopter-reaches-initial-operational-capability/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_15_2019&utm_term=2019-07-15



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Urban Air Mobility 101

DRONE INDUSTRY INSIGHTS
URBAN AIR MOBILITY 101

Name	Delivery Drones		Passenger Drones	
Purpose	Moving Goods		Moving People	
Explanation	The aerial transport of goods using small and medium cargo drones in cities.		The aerial transport of people using unmanned aerial vehicles, also known as air taxis or flying cars.	
Current Stage	Successfully tested. Running in Zurich, Lugano and Raleigh. Preparing for launch in 4 more cities.		Testing (in Dallas, L.A., Singapore and Melbourne), Certification	
Costs (planned)	5 cents per mile		\$6 USD per seat mile	
Autonomy Levels Required	Today	Future	Today	Future
	Level 3 (Conditional Automation)	Level 5 (Full Automation)	Level 2 (Partial Automation)	Level 5 (Full Automation)
Regulatory Hurdles	Operational Requirements	Platform Requirements	Operational Requirements	Platform Requirements
	BVLOS, Flying Over People, Flying at Night, Dropping Objects, Continuous Airworthiness Insurance	Airworthiness Certification	BVLOS, Flying Over People, Flying at Night, Continuous Airworthiness Insurance	Type Certification, Product Organization Approval (POA), Airworthiness Cert.
Major Players	Wing, Uber Eats, Amazon, DHL, Zipline, Matternet, Flirtey, Flytrex, Skyways, Volans-I, etc.		Aurora, Lilium, Uber, Volocopter, City Airbus, eHang, Joby Aviation, Karem, KittyHawk, XTI, etc.	

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Source: DRONEII.com, Pictures: Shutterstock.com Date: July 9th, 2019

Everdrone completes autonomous drone delivery between Swedish hospitals

DELIVERY EMERGENCY SERVICES EUROP EHEADLINE NEWS HEALTH ALEX DOUGLAS JULY 16, 2019



The flight stretched 4.4 km and was made possible through a first-of-its-kind permit given out by the Swedish Transport Agency.

The flight was also unique in the sense that the landing was performed in a **GPS denied location** between tall buildings and only made possible by Everdrone's onboard sensor system.

Each year about 7400 transports are carried out between the three major hospitals in Sweden's second largest city, Gothenburg. A majority of the goods are light-weight with a high value,



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such as blood bags or laboratory samples. In many situations, time is of the essence for this type of deliveries, and during rush hours there is a risk of traffics jams causing significant delays.

By collaborating with the Innovation Platform, the healthcare, academia and the Life Science industry, Everdrone is researching the possibility of using drones as a mean of transportation between hospitals. Mats Sällström commented: “A major step forward in turning the concept into reality was taken last week when we successfully performed a number of fully autonomous drone flights in fully realistic environments.”

The total flight path is 4.4km, of which 80% stretches parks and recreational areas, and 20% stretches residential areas. Watch the flight here:

https://www.commercialdroneprofessional.com/video-everdrone-completes-autonomous-drone-delivery-between-swedish-hospitals/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-307327-Commercial+Drone+Professional+DNA+-+2019-07-16

New Smartphone App Enables Autonomous UAV Missions 15 Jul 2019



Researchers at [Cranfield University](#) have announced the development of a smartphone app which can connect with off-the-shelf unmanned aerial vehicles and send them to autonomously inspect multiple locations using coordinates received by SMS **text message**. Controlling drones in this way could be useful for a variety of applications including the collection of crop health data and searching for missing persons.

The goal of the CASCADE (Complex Autonomous Systems Configuration and Design Exploratory) project is to accelerate the exploitation of drones across a range of science and industry applications by **automating** control and facilitating communication between multiple drones so they can work on tasks **together**.

Alex Williamson, Experimental Research Fellow in UAV Operations in the Centre for Autonomous and Cyber-Physical Systems, Cranfield University, said: “Autonomy is a fundamental factor in increasing the ease of adoption of UAVs for many applications while reducing operational costs. Creating this smartphone app has demonstrated that UAVs can carry out complex tasks autonomously from simple instructions.

https://www.unmannedsystemstechnology.com/2019/07/new-smartphone-app-enables-autonomous-uav-missions/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=3c39f942e2-eBrief+2019+Jul+16&utm_medium=email&utm_term=0_6fc3c01e8d-3c39f942e2-119747501



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Drone demonstrations in 50-mile BVLOS corridor during New York UAS

Symposium Haye Kesteloo Jul. 16th 2019



In its second year, NUAIR is hosting the [2019 New York UAS Symposium](#) at Turning Stone Resort in Verona, NY. During the three-day event, you will be able to **watch drone demonstrations using the 50-Mile BVLOS corridor** outfitted with the radar and technologies needed to make the entire corridor testable airspace. The 2019 New York

UAS Symposium will take place from September 16 to 18, 2019.

The event will take place at Turning Stone Resort in Verona, NY, September 16-18, 2019. Last year's symposium brought in over 300 participants, and we're expecting an even larger turnout this year.

We are **on track** to have the full 50-mile corridor installed with the radar and technologies needed to make the entire corridor testable airspace. You will see multiple use-case scenarios unfold and see what future, routine BVLOS flight protocols will look like under a universal UTM system. To register and to learn more about the program, [click here](#).

<https://dronedj.com/2019/07/16/drone-demonstrations-new-york-uas-symposium/>

17Jul19

Alphabet's Wing launches app to manage air traffic for drones Andrew J.

Hawkins@andyjayhawk Jul 16, 2019



Wing has built an app for an air traffic control system for drones. It is called [OpenSky](#), and it's been approved to manage drone flights in Australia, where it is free. Earlier this year, Wing was [approved to launch its first public drone delivery service](#) after Australia's aviation authority granted it regulatory approval. The app is available in both the Google Play and Apple App stores, as well as on the web.

"Whether you're a hobbyist who loves to fly, or a business that uses unmanned aircraft to survey land or deliver goods, OpenSky makes it easy to find out where and how to fly, tailored to your operation," the company says on its website.

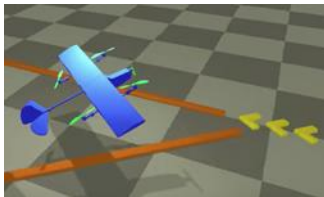


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For companies like Wing, an air management system is crucial if it wants to realize its goal of thousands of small drones zipping along at low altitudes without crashing into buildings, trees, or each other. Numerous companies, including AirMap and Iris Automation, are working on similar systems.

Wing is also working with the US Federal Aviation Administration to pilot a drone delivery system. But Australia and its neighbor New Zealand have been at the forefront of small, electric, unpowered aviation. The Australian regulator, CASA, claims that Wing's drone delivery launch in April was "very likely" **a world first**. Kitty Hawk, the flying car company backed by Google founder Larry Page, received certification to launch a commercial service in [New Zealand last year](https://www.theverge.com/2019/7/16/20696249/alphabet-wing-drone-air-traffic-control-app). <https://www.theverge.com/2019/7/16/20696249/alphabet-wing-drone-air-traffic-control-app>

Anyone Can Design a Hybrid Drone with MIT CSAIL's AI Platform Malek Murison July 16, 2019



From delivery to personal transport, a whole range of exploratory efforts to combine fixed-wing and VTOL methods are underway. Most have evolved as a reaction to battery life constraints.

However, the dynamics involved when developing a drone that can seize the advantages of both vertical and horizontal flight are complex. Particularly when engineers have to develop one control system for hovering, and another for gliding horizontally. Usually, these control systems are designed manually and from scratch – a process that's difficult, expensive and time-consuming.

Which is where MIT's Computer Science and Artificial Intelligence Lab (CSAIL) team comes into the picture. The team has developed a platform to simplify the customization and design process for hybrid drones. The system allows users to design hybrid drones of different sizes and shapes that operate using a single controller.

"Our method allows non-experts to design a model, wait a few hours to compute its controller, and walk away with a customized, ready-to-fly drone," says MIT CSAIL grad student Jie Xu, lead author of a new [paper](#) about the work that will be presented later this month at the SIGGRAPH conference in Los Angeles.

"The hope is that a platform like this could make versatile 'hybrid drones' much more accessible to everyone." <https://dronelife.com/2019/07/16/anyone-can-design-a-hybrid-drone-with-mit-csails-ai-platform/>



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The flamethrower drone will soon be a thing you can buy *In pieces, anyhow.* Sean Hollister@StarFire2258 Jul 16, 2019

In 2015, a Connecticut teenager raised the question of whether our robots have the right to bear arms when he jury-rigged [a working flamethrower](#) — and separately, [a semiautomatic pistol](#) — to his drone.



This Thursday, for better or worse, you'll be able to easily build a flying flamethrower yourself. You're looking at a the [Throwflame TF-19 Wasp](#), a functional attachment for commercial-grade heavy lift drones that can hit targets up to 25 feet away, with a one-gallon fuel tank that can produce a stream of fire for 100 seconds.

Mind you, the \$1,499 price won't get it up in the sky, as you'll need to provide the drone, too — which you may need to piece together since commercial drones are often modular, and don't include things like flight controllers in the box.

Throwflame tells *The Verge* that its video features a DJI S1000 drone with an A2 flight controller, 6S 16,000mAh LiPo battery and a TBS Tango R/C remote, which — checks notes — could easily add another \$2,600 to the cost. The company says it's also offering custom-built turnkey drones, ranging from \$1,000 to \$10,000 and up, depending on how far and fast it needs to fly and what kind of image you expect it to beam home.

Why would you genuinely need such a thing? Well, there was [that one example](#) where a flamethrower drone was used to clear power lines in China... and the company suggests it can be used for controlled grass burns, and to destroy wasp nests, as a couple examples.

The company says the flamethrower attachment will go on sale this Thursday. [Like Boing Boing's David Pescovitz says](#), "What could possibly go wrong?"
<https://www.theverge.com/2019/7/16/20697157/the-flamethrower-drone-will-soon-be-a-thing-you-can-buy>

Grand Sky among First in the World To Purchase The Northrop Grumman Firebird

July 17, 2019 News



Grand Sky Development Company, LLC signed a deposit agreement with Northrop Grumman to purchase Firebird, the company's **optionally piloted** intelligence, surveillance, and reconnaissance aircraft system. It delivers medium altitude, long



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endurance, multi-mission flexibility. It will be based at Grand Sky and can fly anywhere in the country, staying on station for multiple hours before returning. Mission capabilities include ISR, domestic security, emergency response, communications, humanitarian, and scientific missions.

President Thomas Swoyer Jr., said, “The goal is to have the aircraft deployed around the country on a variety of missions. Our ability to map vast areas, stay “on-station” over an area for long periods of time to support emergency response or to reach remote areas is unmatched.” <https://uasweekly.com/2019/07/17/grand-sky-among-first-in-the-world-to-purchase-the-northrop-grumman-firebird/>

18Jul19

U.S. FAA to again delay drone tracking rule JULY 17, 2019 David Shepardson POLITICS

WASHINGTON (Reuters) - The Federal Aviation Administration has again delayed plans to propose new rules requiring the remote identification of drones. Congress directed the FAA in 2016 to issue regulations or guidance by July 2018 to permit the public, the FAA, law enforcement and others to remotely track and identify drones and their operators during flight.

A U.S. Transportation Department status update now says the FAA plans to propose the regulation by Sept. 20 - after it earlier promised it by July 21. U.S. Representative Scott Perry, a Republican, disclosed the new delay at a House aviation safety hearing Wednesday and said that was **unacceptable**. “The importance of the issue demands (FAA’s) immediate action,” Perry said. “FAA is failing to mitigate safety threats.”

A July 2 letter from the top House Republicans and Democrats overseeing aviation issues to the FAA, Transportation Secretary Elaine Chao and the White House said the delay “poses serious risks to the National Airspace System, its users, and the nation’s most critical and sensitive facilities and assets.” The letter noted that once the proposal is published, it will take up to **two more years** to be finalized. <https://www.reuters.com/article/us-usa-drones-congress/us-faa-to-again-delay-drone-tracking-rule-document-idUSKCN1UC2FM>

Global drone market estimated to reach \$14 billion over next decade Bryan Pietsch TECHNOLOGY NEWS JULY 17, 2019

WASHINGTON (Reuters) - The worldwide non-military drone market, dominated by manufacturers in China, will triple in size to \$14.3 billion in sales over the next decade, a study released on Wednesday said, even as U.S. officials warn of national security risks.



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The market, estimated at **\$4.9 billion this year**, will benefit from a gradual opening of U.S. airspace by the Federal Aviation Administration and increased use by commercial industries, according to the study by aerospace analysis company Teal Group.

The leading market segment for drones, the study said, is industrial inspection, which includes industries such as construction, energy and mining. They use drones to survey sites and transmission lines, among other things. Use in agriculture, for spraying crops and analyzing fields, ranks second.

<https://www.reuters.com/article/us-usa-security-drones/global-drone-market-estimated-to-reach-14-billion-over-next-decade-study-idUSKCN1UC2MU>

New safer, inexpensive way to propel small satellites July 16, 2019 Purdue University



Finding inexpensive solutions for propelling CubeSats is one of the most critical components of the rapidly growing industry of commercial launches of satellites the size of a loaf of bread. The first CubeSat was launched in 1999. Since then, more than 1,000 have been launched.

Purdue University researchers have created a novel micropropulsion system for nanosatellite applications using a liquid-fed pulsed-plasma thruster. It uses a liquid propellant for Lorentz-force pulsed-plasma accelerator and extended lifetime ignition system driven by nanosecond-long pulses.

"Our innovation addresses current challenges with CubeSat micropropulsion systems including short operational lifetimes, contamination risks and economic challenges," said Alexey Shashurin, an assistant professor of aeronautics and astronautics in Purdue's College of Engineering. "Our system is better able to operate reliably for the entire mission, and the liquid propellant we use does not create the contamination risks to the subsystems that we see with current options."

Shashurin and his team worked with the Purdue Research Foundation Office of Technology Commercialization to file a provisional patent on the technology. They are **looking for partners** to continue development. <https://www.sciencedaily.com/releases/2019/07/190716073735.htm>



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Cape Ditches DJI for US-Made Skydio Drones Amid Security Concerns Miriam

McNabb July 18, 2019



image courtesy Cape.com

Last spring, DRONELIFE had the opportunity to use the [game-changing Cape platform](#) for remote operations. [Cape's](#) aerial telepresence platform changes the definition of pilot and commander, allowing a subject matter expert to control the drone and gather the data they need in real-time, while a pilot on the ground – and sophisticated software – maintains flight safety. Cape's target is law enforcement where initial trials have proven successful. Now, in one of the first reactions to the [U.S. Government's prohibition](#) against foreign-made drones, Cape has announced they will drop support of DJI drones immediately, in favor of U.S. manufactured [Skydio](#).

The wrangling over data security and DJI drones has been going on for several years. Despite DJI's efforts to quell rumors through an [independent audit of their systems](#), a new [government version of their software](#), and [assembly of aircraft in the U.S.](#), the U.S. Congress recently [passed a defense spending bill](#) prohibiting the use of drones manufactured in "listed" countries – including China.

Cape's defection is the first such we've seen as a result of the ruling. Law enforcement, firefighting and other public service agencies represent a rapidly growing vertical for the drone industry. If new drone programs decide that "Made in the U.S.A." is criteria for purchase, DJI could feel the hit in U.S. markets – and **manufacturers like Skydio could benefit significantly.** <https://dronelife.com/2019/07/18/cape-ditches-dji-for-us-made-skydio-drones-amid-security-concerns/>

How Law Enforcement, Firefighters, and Search & Rescue Teams are Using UAS

Jeremiah Karpowicz July 16, 2019



While public safety agencies in the United States began utilizing drones in 2013, you'd have been hard-pressed to find many organizations doing so in a major way. Part of that was due to the limitations of the technology, but payload advances that have allowed police and fire departments to do everything from remotely stream live images to utilize a thermal camera to get a heat signature of a roof have proven to be real game-changers. More and more local and state agencies are starting to adopt and utilize UAS technology, but it's advocates like Los Angeles



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Fire Department Firefighter Derrick Ward that have helped these professionals truly understand what kind of increased situational awareness the technology can provide.



Derrick Ward at the Public Safety UAS Event hosted by Enterprise UAS

Derrick has [showcased the success of the LAFD’s drone program](#) and also explained in detail [how the technology can literally save someone’s life](#). By providing public safety crews with drone training resources that directly lead to better outcomes, Derrick has been able to help departments understand what it can mean for them and for the public they serve when they properly adopt drone technology.

He helped lead a recent **2-day public safety event** for Northern California public safety professionals interested in starting or expanding their UAS program. **Hosted by DJI and Enterprise UAS**, the event explained and explored how law enforcement, firefighters, and search and rescue teams are using UAS and FLIR thermal imaging cameras to aid in situational assessment, fire management, and search and rescue operations.

https://www.expouav.com/news/latest/law-enforcement-firefighters-and-search-rescue-uas/?utm_source=marketo&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter&mkt_tok=eyJpIjoiWWpJeFpqaGxOamRqTUdVMYslnQiOiJrSHBxYzBCMnpEcHhvaGZWdnRDVG9QemZONVwvMFV4WDRqV1JGVVpyVHhMTStSQkxkxjZcl1JFSUNhTTgzTTY2aktqdlp6bHM3ejRtNmNvSFJWand0cUNMdjJ4SjUya1dQXC9rVWF6bVFTNytKcW1Vdm5jS0MyWXBpUjkzUmdTdVRUXC8ifQ%3D%3D

Altitude Angel launches UTM conflict resolution service in ‘world first’

APPLICATION BUSINESS HEADLINE NEWS NEW PRODUCTS UK ALEX DOUGLAS JULY 18, 2019



The company says it has taken a huge step towards allowing automated drone flights to become a day-to-day reality.

It gives the pilot or operator the ability to check for conflicts in their drone flights quickly and easily using the firm’s tried-and-trusted safety technology.

Available via Altitude Angel’s developer platform and powered by its GuardianUTM operating system, the Conflict Resolution Service (CRS) addresses some of the key risks which prevent operations beyond visual line of sight today.

Richard Parker, Altitude Angel’s CEO and founder, commented: “The ability for drones and automated aircraft to strategically plan flights, be made aware of potential conflict, and alter



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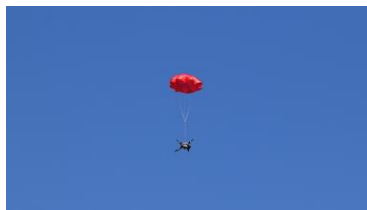
their route accordingly is critical in ensuring safety in our skies. This first step is all about **pre-flight coordination**, between drone pilots, fleet operators and other UTM companies.”

“The tactical component of CRS answers the biggest challenge BVLOS flight brings; how do you deal with the unexpected? Being able to predict and resolve conflict mid-flight by providing appropriate and timely guidance will revolutionize automated flight. CRS is one of the critical building blocks on which the drone and automated flight industries will grow.”

<https://www.commercialdroneprofessional.com/altitude-angel-launches-utm-conflict-resolution-service-in-world-first/>

19Jul19

ParaZero’s SafeAir Unlocks Flight Over People in Canada With Phantom and Mavic Drones July 17, 2019 News



ParaZero Technologies is pleased to announce that its ASTM compliant SafeAir Systems for the DJI Phantom 4 Series and DJI Mavic 2 Series comply with the latest Transport Canada regulations for operations over people. This allows licensed operators to operate over people, effective immediately.

On June 1st, 2019, Transport Canada’s new rules for flying Remotely Piloted Aircraft Systems (RPAS) in Canada came into effect. These rules are divided into two categories, basic and advanced. Advanced operations include flights in controlled airspace, flights near people and flights over people.

The framework developed by TC allows manufacturers or modifiers of RPAS to declare compliance with the requirements of each of the three advanced operations. While DJI has already declared compliance for these RPAS for operations in controlled airspace and operations near people, operations over people are only permitted with ParaZero’s SafeAir Systems + ASTM Professional Kit. https://uasweekly.com/2019/07/17/parazeros-safeair-unlocks-flight-over-people-in-canada-with-popular-phantom-and-mavic-drones/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_18_2019&utm_term=2019-07-18



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DJI offers further reassurance to customer security after Cape concern BUSINESS DJI HEADLINE NEWS INTERNATIONAL MANUFACTURER UNITED STATES ALEX DOUGLAS JULY 19, 2019



Speaking to Commercial Drone Professional, DJI said that Cape’s decision had been made on “**false speculation**.” “At DJI, safety is at the core of everything we do, and the security of our technology has been independently verified by the U.S. government and leading U.S. businesses. DJI gives all customers full and complete control over how their data is collected, stored and transmitted

and has led the drone industry in creating solutions that meet the needs of a variety of customers, from police and fire departments to U.S. government agencies.”

“We are disappointed to learn about Cape’s decision which is based on false speculation, and remain committed to continuously working with all of our customers — including **520 public safety agencies** who trust our products to conduct critical missions and the entire U.S. drone industry to ensure access to the most advanced technology and software services.”

The speculation surrounding DJI drones follows the Department of Homeland Security in the United States releasing an alert earlier this year which urged caution when purchasing and operating Chinese-made drones.

DJI has always maintained that it gives customers “full and complete control over how their data is collected, stored, and transmitted,” and says “customers can enable all the precautions DHS recommends.” https://www.commercialdroneprofessional.com/%ef%bb%bfdji-offers-further-reassurance-to-customer-security-concerns-after-cape-concerns/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-307686-Commercial+Drone+Professional+DNA+-+2019-07-19

PCL Construction and 3DR Sign Multiyear Drone Software Agreement July 17, 2019 News



PCL has entered into a **three-year** corporate licensing agreement with 3DR to make their Unmanned Aircraft Systems software, Site Scan, available for unlimited use on all PCL projects, worldwide.

PCL Construction started working with 3DR in 2016 to leverage drone technology for site documentation, quality control and progress reporting. The platform includes an iPad app for drone flight planning and a web application for turning drone photos into maps as well as 3D models of construction sites. It



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also allows project teams to share updates with owners and project stakeholders. It has been used on more than 30 PCL projects across North America, and with this agreement, PCL is standardizing Site Scan as its drone software platform across the company.

“Site Scan has changed the way teams communicate on the jobsite,” said Deron Brown, President and COO, PCL’s U.S. operations. “Using this straightforward tool has improved our on-site documentation of existing conditions, work in place, and as-builts. Workflows are efficient and produce repeatable results that integrate into our existing software and systems.”

https://uasweekly.com/2019/07/17/pcl-construction-and-3dr-sign-multiyear-drone-software-agreement/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_18_2019&utm_term=2019-07-18