



## UAS and SmallSat Weekly News

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### **Kansas State Gets FAA's First BVLoS Waiver to a University** Press Release



[Kansas State University Polytechnic Campus](#) has received a waiver from the Federal Aviation Administration to fly unmanned aircraft systems beyond the line of sight. It's **the first such waiver granted to a university by the FAA.**

The FAA certificate to Kansas State Polytechnic's Applied Aviation Research Center waives the rules regarding visual sight of aircraft operations by the pilot and visual observers. This allows Kansas State Polytechnic to conduct research and operations where pilots and observers can no longer see their aircraft.

"These operations and research will provide valuable insight into regulation and safety measures for UAS in the national airspace," said Travis Balthazor, Kansas State Polytechnic's UAS flight operations manager. "At the time of notification to us, the [FAA's website](#) showed only 20 waivers to this regulation, and only half are waived to allow small UAS operations where the remote pilot in command and the visual observers may not be able to see the aircraft."

Kurt Carraway, the Applied Aviation Research Center's UAS executive director, emphasized the importance of this waiver to K-State Polytechnic's research and partnership with the FAA in integrating UAS into the national airspace system. <https://www.uasvision.com/2018/06/26/kansas-state-gets-faas-first-bvlos-waiver-to-a-university/>

**Drones may be delivering food to Holly Springs residents soon** Maggie Brown, WRAL.com editor, Brad Johansen WRAL reporter and anchor

[HOLLY SPRINGS, N.C.](#) — If you live in Holly Springs, drones could soon be delivering packages at your doorstep.

If approved at the Aug. 7 meeting, the North Carolina Department of Transportation and the town will team up with the company [Flytrex](#) to do something that many thought would only be seen in movies -- residential food deliveries by drone.

Flytrex is an international organization based in Israel offering drone supplies in 90 different countries.



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James Pearce, communications officer for NCDOT, said that the department is just taking baby steps toward this project. But he believes Holly Springs is a perfect place to begin testing these drones.

The FAA received 150 applications from towns around the country, but selected Holly Springs as one of the 10 winning programs. Flytrex is the only food delivery platform with a product on the market with drones. The aircraft are about 6 pounds in size.



"Flytrex will provide a revolutionary food delivery service to suburban areas, operating autonomous **flights beyond visual line of sight above human beings**," Flytrex said on its website. The FAA program is expected to go through a two-and-half-year trial.

In addition to the food drone delivery project in Holly Springs, Pearce said the NCDOT hopes to use drones to deliver medicine and blood samples in Wake County in the future.

<https://www.wral.com/drones-may-be-delivering-food-to-holly-springs-residents-soon/17708448/>

**Trump Administration Supports Bill to Prevent UAS Threats** Brenda Marie Rivers July 19, 2018 Latest News, Legislation



The Trump administration has expressed support for a Senate bill that would authorize the departments of Homeland Security and Justice to develop, test and deploy technology aimed at countering unmanned aircraft systems that pose safety risks to the public.

The *Preventing Emerging Threats Act of 2018* **also proposes measures to further commercial drone market development**, protect privacy and civil liberties and increase the safety of national airspace operations, the White House [said Tuesday](#). Current law prohibits the federal government from using detection, tracking and mitigation platforms designed to thwart drone threats.

The White House calls for the creation of a legal framework meant to safeguard people from those who use UAS for nefarious purposes such as terrorism, espionage, illicit surveillance, illegal aircraft and law enforcement interference, contraband delivery in prisons or the smuggling of drugs and other harmful materials along U.S. borders.

<http://www.executivegov.com/2018/07/trump-administration-supports-bill-to-prevent-uas-threats/>



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### **Airbus and International SOS Sign MoU for UAS Medical Cargo Delivery** July 20, 2018 News



Airbus and medical and security risk services company International SOS have signed a Memorandum of Understanding to jointly study the viability of using aircraft or unmanned systems to deliver medical cargo and supplies.

Under the agreement, signed 18 July, Airbus will help define and install reliable aircraft or unmanned aerial medical cargo deliveries as part of International SOS MedSupply services. MedSupply deploys medical supplies, specialist medical care and equipment to meet the requirements of preventive health programs or in support of a medical emergency in urban as well as remote locations.

Airbus and International SOS will thus collaborate on safe, secure and enterprise drone delivery for hub-to-hub distribution of medical cargo, compliant with local regulatory bodies, as International SOS has global operations worldwide in emergency evacuation and medical resupply. [http://uasweekly.com/2018/07/20/airbus-and-international-sos-sign-mou-for-uas-medical-cargo-delivery/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_newsletter\\_2018\\_07\\_20&utm\\_term=2018-07-21](http://uasweekly.com/2018/07/20/airbus-and-international-sos-sign-mou-for-uas-medical-cargo-delivery/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_20&utm_term=2018-07-21)



**2nd Quarter 2018 News. HAMR UAS selected for Army Expeditionary Warrior Experiment (AEWE).** This event is located in Fort Benning, GA where the Army's Maneuver Center of Excellence is headquartered and is conducted January to March 2019. This event is an experiment of new technologies that better support the soldier on the battlefield. AAC's technology will be tested and evaluated with infantrymen.



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This event is an experiment of new technologies that better support the soldier on the battlefield. AAC's technology will be tested and evaluated with infantrymen. The proposed experiment will test how well the HAMR UAS supports a dismounted infantry company as they are attacking an enemy position. Successful completion of this experiment will bring significant interest from the US Army to employ HAMR UAS to enhance soldier survivability on the battlefield.

**AAC signs fulfillment agreement with AerialSolutions UAS.** AerialS is a drone service provider to the oil & gas, infrastructure inspection and environmental mapping industries specializing in extreme and austere environments. Located in Houston, TX, AerialS' Dan Pizzato currently has proven the value of drones to these markets, but knows that additional growth is possible if his company can offer longer endurance services to his customers. AAC has agreed to fly HAMR on AerialS projects where longer endurance capabilities are required, and sell this raw imagery to AerialS for inclusion into its customers' final reports. The intent is that once the HAMR aircraft is proven, AerialS will integrate HAMR into mainstream operations of their business. <http://www.aerialsuas.com/>

If you would like to receive the AAC Quarterly News, contact Bill Fredericks at [w.j.fredericks@advancedaircraftcompany.com](mailto:w.j.fredericks@advancedaircraftcompany.com)

He was interviewed on *CEO Money*. View the clip here:

<http://www.wfn1.com/interviews/video-interviews/ceo-william-fredericks-on-the-hybrid-electric-drones-from-advanced-aircraft-company/>

### **DJI Adds Geofencing Flexibility for Enterprise Users** [Malek Murison](#) on July 17, 2018



DJI has moved to improve the user experience of its enterprise users with improvements to its geofencing system. DJI said in a [statement](#) released today that “professional drone pilots with authorization to fly in sensitive locations can now use a streamlined application process”, which will provide them with unlocking codes within 30 minutes.

The decision reflects the difficult balance DJI has attempted to strike in the past, protecting sensitive locations with geofencing software that can often be a hindrance to enterprise users who have permission to fly. Unlocking airspace in a timely manner has not always been easy for enterprise users. And with more first responders and emergency



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services adopting DJI technology, the move to streamline that process is welcome.

The company said that the improvements are “carefully designed to help expand the beneficial uses of drones in sensitive areas that have been restricted in DJI’s geofencing system. While those areas will remain restricted to more casual drone pilots, **DJI now staffs its global authorization team around the clock** in order to process applications and provide unlocking codes quickly.” <https://dronelife.com/2018/07/17/dji-geofencing-flexibility-commercial/>

### Airbus unites with EASA and CAAS to better define drone regulations

APPLICATION BUSINESS HEADLINE NEWS EMMA CALDER JULY 17, 2018



The European Aviation Safety Agency has signed a collaboration agreement with the Civil Aviation Authority of Singapore (CAAS) and Airbus to establish a “framework for the exchange of information and technical expertise.”

EASA adds that the partners will be “leveraging Airbus’s experience with the ongoing Skyways project.” Skyways is a partnership, signed in 2017, between Airbus Helicopters and Singaporean postal service to trial an unmanned aerial package delivery system in the city state.

CAAS director general, Kevin Shum, said: “This is timely as we seek to better define the operating conditions for the growing number of beneficial uses of [unmanned aircraft systems] in urban environments.” EASA executive director Patrick Ky, added: “Unmanned aircraft systems used in urban environments will shape the future of public transport.” Airbus vice-president of engineering, Jean-Brice Dumont, describes the collaboration as a: “positive move to shape up the safety regulations” as “urban air mobility [is turning] into a business reality for us.” [http://www.commercialdroneprofessional.com/airbus-unites-with-easa-and-caas-to-better-define-drone-regulations/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-269171-Commercial+Drone+Professional+DNA+-+2018-07-20](http://www.commercialdroneprofessional.com/airbus-unites-with-easa-and-caas-to-better-define-drone-regulations/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-269171-Commercial+Drone+Professional+DNA+-+2018-07-20)





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### Sierra Nevada, Israel Aerospace Industries Plan Joint VOTL UAS Offering for US Market Nichols Martinon July 23, 2018 C4ISR, News



[Israel Aerospace Industries](#) and [Sierra Nevada Corp.](#) have partnered to jointly develop an unmanned aircraft system with vertical takeoff-and-landing features.

The partnership seeks to offer a tactical VTOL UAS to the U.S. defense market as both companies have observed a demand for unmanned aerial platforms that can support military air operations. The joint offering will be designed to help forward-positioned troops perform intelligence, surveillance and reconnaissance missions in austere locations without the use of a runway.

Under the collaboration agreement, SNC plans to combine its UAS development and test experience with IAI's tools and methods to produce a tactical UAS platform.

<http://blog.executivebiz.com/2018/07/sierra-nevada-israel-aerospace-industries-plan-joint-votl-uas-offering-for-us-market/>

### Picking up the pieces – tech company finds way to extract data from crashed drones July 20, 2018 Feilidh Dwyer



The company, VTOLabs, provides technology solutions relating to cyber security, digital forensics and data recovery.

When someone does something stupid with their drone, how do authorities identify the owner?

Many countries, including the United States, require that users register their flying machine with the local aviation authority. However, when the owner hasn't registered or a drone has been stolen, as is often the case, it is often difficult to find out who is responsible for using a drone in an irresponsible manner.



Near misses between drones and planes, such as this one near Las Vegas this year, are part of the reason for extra interest in technology to help identifying dangerous drone



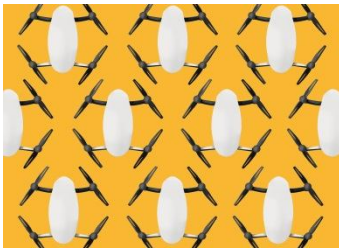
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pilots.

CEO of VTOLabs Steve Watson [told ABC News5 Cleveland](#) that his company has figured out how to get hidden information off a drone. Watson explained that by downloading data from the drone's onboard chip you can find where the drone took off, what its flight path was and where it landed. "You can find the previous flights that it's flown, how fast it flew, how high it flew. You can find the users registered information—their e-mail address. Sometimes their home address and some drones. *We've even seen credit card information,*" he said.

With technology like this available, we can fairly assume that it won't be long before police and other authorities will be regularly using data extraction technology to catch people behaving badly with their drones. <https://www.wetalkuav.com/tech-company-extracts-data-from-crashed-drones/>

### **HOW A FLOCK OF DRONES DEVELOPED COLLECTIVE INTELLIGENCE** ROBBIE GONZALEZ SCIENCE 07.18.18



The [drones](#) rise all at once, 30 strong, the domes of light on their undercarriages glowing 30 different hues—like luminescent candy sprinkles against the gray, dusky sky. Then they pause, suspended in the air. And after a couple seconds of hovering, they begin to move as one. As the newly-formed flock migrates, its members' luminous underbellies all change to the same color: green. They've decided to head east. The drones at the front approach a barrier, and their tummies turn teal as they veer south. Soon, the trailing members' lights change in suit.



It beautiful. It's also kind of amazing: These drones have [self-organized](#) into a coherent





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swarm, flying in synchrony without colliding, and—this is the impressive bit—without a central control unit telling them what to do.

That makes them utterly different from the drone-hordes you've seen deployed at places like the [Super Bowl](#) and [the Olympics](#). Sure, those quadcopter fleets can number more than a thousand, but the movement and position of each unit is all programmed ahead of time. In contrast, each of these 30 drones is tracking its own position, its own velocity, and simultaneously sharing that information with other members of the flock. There is no leader among them; they decide together where to go—a decision they make on the literal, honest-to-goodness fly.

They're like birds in that way. Or bees, or locusts. Or any number of creatures **capable of organizing themselves** majestically and somewhat mysteriously into cohesive groups—a so-called emergent property of their individual actions. A few years ago, they managed to pull it off with 10 drones. Now they've done it with three times that many.

<https://www.wired.com/story/how-a-flock-of-drones-developed-collective-intelligence/>

### **Cincinnati University given \$1 million to research detect-and-avoid UTM technology** July 23, 2018 Philip Butterworth-Hayes UAS traffic management news



A University of Cincinnati project to develop a new management system for unmanned aircraft has secured nearly \$1 million in federal grants.

The Regional Unmanned Traffic Management System was one of 33 projects submitted to the Ohio Federal Research Network, a **state-funded** organization that funds research and development initiatives at 11 Ohio colleges and universities. It aims to develop RouteMaster – an air traffic management system that will allow drones and other unmanned aerial vehicles to avoid each other mid-flight, even if those systems operate on different controls.

“Sinclair College, [a longtime contributor to drone research](#), collaborated with UC on the project. Other partners include Springfield-based Demeter, Inc. and Simlat, an Israeli software company.” UC was one of four institutions that split more than \$6.3 million in federal aid.” <https://www.unmannedairspace.info/uncategorized/cincinnati-university-given-usd1-million-research-detect-avoid-utm-technology/>



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### **Worldwide drone spending valued at \$9.3 billion for 2018** BUSINESS

NEWS EMMA CALDER JULY 23, 2018



A new update to the IDC Worldwide Semiannual Robotics and Drones Spending Guide forecasts that worldwide spending on robotics and drones solutions will reach \$201.3 billion in 2022. Out of that, worldwide drone spending will reach \$9.3 billion in 2018, with the sector expected to grow at a faster rate than the overall market with a **five-year CAGR of 32.1%**.

Enterprise drone solutions will deliver more than half of all drone spending throughout the forecast period with the balance coming from consumer drone solutions. Enterprise drones will increase its share of overall spending with a five-year CAGR of 37.1%.

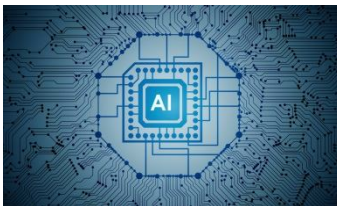
The utilities and construction industries will see the largest drone spending in 2018 of \$925m to \$808m, respectively. Most regions are starting to provide **regulatory clarity**, as they understand the growing need for drone control and an air traffic management system for both enterprise and consumer deployments.

"In addition, as safety continues to be a major concern for consumers and regulators, vendors and IT suppliers are working to alleviate concerns by building drones with multiple redundancies, improving their sensory and collision avoidance technology, and testing 5G-enabled drones to enable greater connectivity while lowering latency."

[http://www.commercialdroneprofessional.com/latest-report-values-worldwide-drone-spending-at-7-1-billion-for-2018/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-269472-Commercial+Drone+Professional+DNA++2018-07-23](http://www.commercialdroneprofessional.com/latest-report-values-worldwide-drone-spending-at-7-1-billion-for-2018/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-269472-Commercial+Drone+Professional+DNA++2018-07-23)

### **Boeing unites with SparkCognition to champion UTM solutions** BUSINESS

NEWS EMMA CALDER JULY 23, 2018



Boeing and SparkCognition will use artificial intelligence and blockchain technologies to track unmanned air vehicles in flight and allocate traffic corridors and routes to ensure safe, secure transportation.

Through the collaboration, they will also provide a standardized programming interface to support package delivery, industrial inspection and other commercial applications.



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Boeing HorizonX Ventures previously invested in SparkCognition to support its development of a cognitive, data-driven analytics platform for the safety, security and reliability of data technology. To help advance UTM and next-generation travel, and evolve the transportation ecosystem, Boeing is starting up a new organisation, Boeing NeXt.

It will leverage Boeing's research and development activities and investments in areas such as autonomous flight and advanced propulsion, as well as focus on modelling smart cities and exploring new market opportunities to solve for the transportation challenges of the future. [http://www.commercialdroneprofessional.com/boeing-unites-with-sparkcognition-to-champion-utm-solutions/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-269472-Commercial+Drone+Professional+DNA++2018-07-23](http://www.commercialdroneprofessional.com/boeing-unites-with-sparkcognition-to-champion-utm-solutions/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-269472-Commercial+Drone+Professional+DNA++2018-07-23)

**24Jul18**

**FAA Clarifies Federal Authority Over Drone Rulemaking** Betsy Lillian July 23, 2018



A hot topic for some time has been the Federal Aviation Administration's (FAA) authority over navigable airspace and, thus, the confusion surrounding federal preemption for state and local unmanned aircraft system (UAS) laws.

Now, the FAA has issued a statement on where things stand on federal vs. local drone rulemaking authority:

"Congress has provided the FAA with **exclusive** authority to regulate aviation safety, the efficiency of the navigable airspace and air traffic control, among other things. State and local governments are not permitted to regulate any type of aircraft operations, such as flight paths or altitudes, or the navigable airspace," the agency says.

"However, these powers are not the same as regulation of aircraft landing sites, which involves local control of land and zoning. Laws traditionally related to state and local police power – including land use, zoning, privacy and law enforcement operations – generally are not subject to federal regulation."

The FAA adds, "Cities and municipalities are not permitted to have their own rules or



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regulations governing the operation of aircraft. However, as indicated, they may generally determine the location of aircraft landing sites through their land use powers.”

In December 2015, the FAA [laid out a fact sheet](#) to reiterate its regulatory authority. It was designed to provide information for states and municipalities considering their own drone laws or regulations. <https://unmanned-aerial.com/faa-clarifies-federal-authority-over-drone-rulemaking>

### **INSIDE THE AIRVENTURE DRONE SHOW** July 20, 2018 Jim Moore

Airplanes, fireworks, and drones will take turns in the night sky at EAA AirVenture in Oshkosh, Wisconsin, a carefully choreographed display that brings new technology to crowd-pleasing aerial entertainment **for the first time.**



Great Lakes Drone Company created custom aircraft to create its light shows and built in several safety features that helped the firm earn **one of the first FAA authorizations to fly multiple drones at night**

**from a single control station.**

The [Great Lakes Drone Company](#) has been working with the Experimental Aircraft Association since December to create this brand-new twist on the popular night airshow, adding unmanned aircraft to the mix for the first time. An [FAA waiver](#) granted to the Michigan firm in 2017 was the third of its kind. The first two waivers went to Intel, known for drone shows at the Super Bowl and Olympic Games, and The Walt Disney Co., which runs drone shows in company parks.

The company agreed to produce its part of the night airshows for a minimal fee, covering only the travel expenses for a team of 12 toting up to 100 custom drones to Oshkosh.

“We’re donating the show to EAA to show that drones and the aeronautical community can get along just fine,” Quinn said. “It just takes coordination.”

[https://www.aopa.org/news-and-media/all-news/2018/july/20/inside-the-airventure-drone-show?utm\\_source=drone&utm\\_medium=email&utm\\_campaign=180724drone](https://www.aopa.org/news-and-media/all-news/2018/july/20/inside-the-airventure-drone-show?utm_source=drone&utm_medium=email&utm_campaign=180724drone)



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### Urban Aeronautics Launches Full Scale Development of CityHawk eVTOL Flying

Car July 23, 2018 News



In conjunction with the unveiling of a new website ([www.metro-skyways.com](http://www.metro-skyways.com)), Urban Aeronautics announces the launch of Full Scale Development for the CityHawk hybrid-power, eVTOL Flying Car.

Initial development and testing will utilize two, 1,000 horsepower, turboshaft engines coupled to electric power generators for operating the vehicle's thruster propellers. Upon the issuance of an FAA "Type Certificate" for the basic air vehicle, the company will transition the main power supply for CityHawk to 100% **hydrogen propulsion**.

The pre-production 'configuration freeze' is the result of having completed demonstrations of the company's unmanned variant, Cormorant. The one-ton Cormorant has so far completed 250 flights. CityHawk's design is identical to the Cormorant's configuration; however, it will be equipped with two engines to conform with FAA commercial certification requirements which call for the continuation of flight in the event of an engine failure. This safety feature is in addition to the ability to deploy a ballistic **parachute** in the event of a catastrophic failure. CityHawk is designed to meet current FAA requirements for twin-engine helicopters. [http://uasweekly.com/2018/07/23/urban-aeronautics-launches-full-scale-development-of-cityhawk-evtol-flying-car/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_newsletter\\_2018\\_07\\_24&utm\\_term=2018-07-25](http://uasweekly.com/2018/07/23/urban-aeronautics-launches-full-scale-development-of-cityhawk-evtol-flying-car/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_24&utm_term=2018-07-25)

25Jul18

### Israeli Drone Firm Taking Part in North Carolina Pilot Program Mike O'Brien July 24, 2018



Flytrex, an Israeli software firm that has developed a control system for **automatic flight of multiple drones**, may soon be helping deliver food to residents of a North Carolina town as [one of 10 test projects](#) sanctioned in May by the Federal Aviation Administration.





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The town of Holly Springs, NC will decide on Aug. 7 whether to proceed with the test, which will be done in conjunction with the state's Department of Transportation. It will involve drone deliveries from local restaurants to consumer's doors.

Flytrex was the first company to provide a [commercial drone delivery service](#), flying in food and other goods for Icelandic ecommerce firm Aha to residents of Reykjavik beginning last August.

It takes a Flytrex-navigated DJI drone about four and a half minutes to travel two miles from the AHA warehouse to a designated spot in Reykjavik, with a human driver completing the delivery. The whole process takes about 20 minutes. The Holly Springs project, however, will involve drone **flights directly to residences**, and the same is planned in Iceland via a system upgrade in the works. <http://multichannelmerchant.com/operations/israeli-drone-firm-taking-part-north-carolina-pilot-program/>

### **Autonomous decision-making one of biggest challenges for flying cars** SAMANTHA

MASUNAGA JUL 24, 2018



#### ***A model of Uber's flying taxi concept***

Despite several proposals to create flying taxis, industry has a ways to go to master how those vehicles will operate without human pilots and make crucial flight decisions on their own.

The meeting of the House Committee on Science, Space, and Technology — billed as **the first congressional hearing** dedicated to the topic of flying cars by Chairman Lamar Smith (R-Texas) . "Traffic and gridlock challenges are better overcome by cars that fly, rather than drive. Although it will be a while before we see widespread ownership and use of personal vehicles that can both be driven and flown, these advances are visible on the horizon."

Among the industry representatives at the hearing were executives from ride-hailing company Uber and Terrafugia, a Woburn, Mass., company that plans to release its Transition flying car next year at a price tag of \$400,000. Both companies aim to operate services that would eventually allow people to be picked up by an **autonomous** flying taxi and transported to their destination. <http://www.latimes.com/business/la-fi-flying-cars-hearing-20180724-story.html>





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### DroneShields' DroneGun Tactical Certified for Human Exposure July 25, 2018 Counter UAS



DroneShield Ltd is pleased to announce that its DroneGun Tactical™ product has been certified as **compliant for human exposure**, in connection with requests by potential government end-users, in relation to their procurement processes.

Certification was obtained in response to the DroneGun Tactical™ product advancing through procurement processes with a number of major defence and other government agencies internationally, for which this was a requirement requested by several agencies.

The certification follows DroneGun MKII™ safety for human exposure certification in December 2017, and DroneSentry™ airport compliance certification in May 2018.

[http://uasweekly.com/2018/07/25/droneshields-dronegun-tactical-certified-for-human-exposure/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_newsletter\\_2018\\_07\\_25&utm\\_term=2018-07-25](http://uasweekly.com/2018/07/25/droneshields-dronegun-tactical-certified-for-human-exposure/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_25&utm_term=2018-07-25)

26Jul18

### Drone ban for children proposed PRESS ASSOCIATION 25 July 2018

Children could be banned from owning drones weighing at least 250 grams. Many small drones are lighter than 250 grams, but children would be stopped from owning heavier versions which can fly further and cause more damage.



**Other measures being considered** include giving police the power to issue on-the-spot fines of up to £300 for misuse and the ability to seize drones being used irresponsibly. The DfT is also considering using of new technology to protect public events, critical national infrastructure and prisons from drone disruption.

Last year an investigation revealed that police are being flooded with reports about drones after a dramatic surge in incidents registered by forces, including rows between neighbours, prison smuggling, burglary "scoping" exercises and snooping fears. Figures obtained by the Press Association showed forces recorded 3,456 episodes in 2016, almost **triple** the 2015 figure

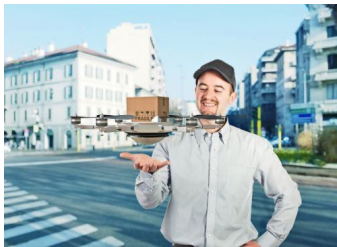


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of 1,237 and more than **12 times** the 2014 tally of 283. The number of near-misses between drones and aircraft has risen from six events in 2014 to 93 last year.

From Monday new rules will be introduced banning drones from flying above 400ft, and within one kilometre (0.6 miles) of airport boundaries. Any breaching these restrictions will face **penalties of up to £2,500** and could also be charged with recklessly or negligently acting in a manner likely to endanger an aircraft or any person in an aircraft, which has a maximum sentence of **five years in prison**. <http://www.dailymail.co.uk/wires/pa/article-5993085/Drone-ban-children-proposed.html?ito=1490>

### **Worldplay Works on Way to Improve Drone Delivery Security** Betsy Lillian July 25, 2018



Researchers at Worldpay Inc., a payment processing and technology company based in the greater Cincinnati, Ohio, area, are investigating the use of drone technology to help combat the growing issue of parcel fraud.

Drone Pay is a prototype developed by Worldpay's innovation team to understand how payment technology can be used to create more secure delivery and fulfillment for online retailers while also adding an additional layer of buy authentication.

The drone-agnostic technology is embedded into a drone landing pad, which is issued to the customer in the form of a **doormat**. When the drone lands to drop off the package, the card details stored within the doormat are read automatically. If the information matches that of the correct recipient, the parcel is released. [https://unmanned-aerial.com/worldplay-works-on-way-to-improve-drone-delivery-security?utm\\_medium=email&utm\\_source=LNH+07-26-2018&utm\\_campaign=UAO+Latest+News+Headlines](https://unmanned-aerial.com/worldplay-works-on-way-to-improve-drone-delivery-security?utm_medium=email&utm_source=LNH+07-26-2018&utm_campaign=UAO+Latest+News+Headlines)

### **Amazon ramps up UAV focus with another patent design** BUSINESS NEWS EMMA CALDER JULY 26, 2018

Described in the patent, which was filed earlier this week, is an airborne fulfillment center (AFC) and the use of UAVs to deliver items from the AFC to users.



The AFC may be **an airship that remains at a high altitude and delivery UAVs may be deployed from the AFC** to deliver ordered items to user-designated delivery locations. As the UAVs descend, they can navigate horizontally toward a user-specified delivery location using **little-to-no**



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**power**, other than to stabilize the UAV and/or guide the direction of descent.

By utilising an AFC for the storage and delivery of items using UAVs, the power required to complete an item delivery is substantially reduced. Only as the UAV approaches earth does it need to fully engage the UAV motors to maintain flight and complete delivery of the item.

After completing an item delivery, the UAV may navigate to a nearby ground-based materials handling facility. Because of the high altitude of the AFC, navigation by a UAV back to the AFC may not be feasible, or an efficient use of power.

While the online retailer is looking to develop the drone delivery division of its business, Amazon Prime Air, it is also looking to bring UAVs in-house to aid its warehouse management. [http://www.commercialdroneprofessional.com/amazon-ramps-up-uav-focus-with-another-patent-design/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-269841-Commercial+Drone+Professional+DNA+-+2018-07-26](http://www.commercialdroneprofessional.com/amazon-ramps-up-uav-focus-with-another-patent-design/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-269841-Commercial+Drone+Professional+DNA+-+2018-07-26)

### Prototype Solar-Powered, High-Altitude UAV Undergoing Flight Tests Sam

Davis | Jul 24, 2018



A high-altitude unmanned-aerial-vehicle prototype, powered by solar panels and batteries, performs functions commonly attributed to spacecraft flying in low Earth orbits.

[UAVOS Inc.'s](#) HAPS (High Altitude Pseudo Satellite) aircraft, being developed with a flexible wing for high-altitude unmanned flight, will provide unique opportunities for both civilian and defense areas, as well as for security tasks.

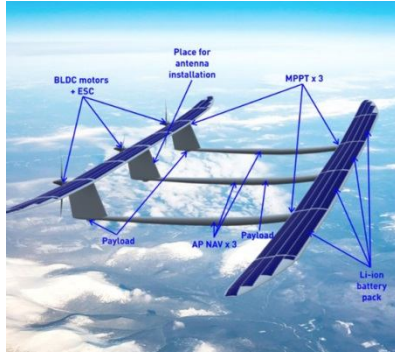
To meet the demands of telecommunication companies, HAPS can create a network of autonomous repeaters of radio and high-speed data signals over practically any territory. "By its very nature, this solution replaces the low-orbital space grouping and can provide services not available for conventional satellite systems," explains Vadim Tarasov of UAVOS. "Such aircraft can carry out long missions, for years operating in air currents over oceans, and territories with no airfield infrastructure, sparsely populated areas, sea borders, taking and relaying information for both civilian and military facilities."

Functional capability of the advanced technology has been tested on the HAPS ApusDuo flight prototype. In general, the **total flight time** of UAVOS solar-powered test aircraft is more than **1000 hours**. Test flights took place at an altitude of up to **65,617 feet**. The flying model has a 46-



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ft. span of the wing and weighs 33 lb. The airframe of the unmanned vehicle is made of materials based on carbon fibers, which have very high strength, low weight, and are designed for long-term continuous operation.



Various combinations of composite materials are used in the wing design. The sets of solar panels are divided into groups located in relatively equal planes of the wing, due to the uneven illumination of the wing in flight, and to obtain the maximum efficiency factor. The power circuit of the aircraft has two to four maximum-power-point-tracking (MPPT) converters of solar energy. Telemetry data obtained from them (power, voltage, current, and temperature), as well as from other

numerous systems of the aircraft during the flight, are recorded at the ground control station. <https://www.powerselectronics.com/alternative-energy/prototype-solar-powered-high-altitude-uav-undergoing-flight-tests>

### Insitu’s Photogrammetry Payload Pushes Theoretical Limits of Accuracy

staffon: July 25, 2018

Boeing subsidiary Insitu has revealed that its latest advancements in High Accuracy Photogrammetry (HAP) are pushing the theoretical limits of aerial photography at altitude.

Last month Insitu’s latest prototype carried a HAP payload that can capture images accurate to **within five centimeters (cm) horizontally and 10cm vertically**. Insitu describes this new capability as “ground-breaking”, and says it “now leads the industry in accuracy that can be obtained without ground control from a fixed-wing Unmanned Aerial System traveling more than 100km (62.1 miles) per hour from higher than 1,000 ft.” Read more: [DroneBase & Airbus Aerial Partner to Combine Drone and Satellite Imagery](#)



Insitu’s ScanEagle is an ideal platform for the latest HAP technology. More than 150 square kilometers (nearly 60 square miles) can be covered in a single flight, and with the latest HAP payload, imagery with greater accuracy than ever before can be captured.

A HAP payload can be integrated with a Phase One 50 or 100-



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megapixel camera onto UAS platforms operating as part of Insitu's INEXATM suite of remote sensing products, information delivery services and solutions for enterprise customers.

<https://dronelife.com/2018/07/25/insitu-photogrammetry-payload/>

27Jul18

### Unmanned aircraft company to create robotics facility in Manassas July 27, 2018

Unmanned aircraft company **Aurora Flight Sciences** plans to build a **\$13.75 million** robotics facility at its headquarters in Manassas, creating **135 jobs**. The facility will include a manufacturing unit, a research and development lab, a hanger and office space. The Manassas-based company was acquired by The Boeing Co. in 2017. Aurora Flight Sciences is a developer and manufacturer of advanced aerospace platforms and autonomous systems.

Former Gov. Terry McAuliffe approved a \$500,000 grant from the Commonwealth's Opportunity Fund to assist Manassas with the project. The company also will be eligible to receive sales and use tax exemptions on manufacturing equipment, as well as a Major Business Facility Job Tax Credit.

[http://www.virginiabusiness.com/news/article/332815?utm\\_source=email&utm\\_medium=email&utm\\_campaign=daily](http://www.virginiabusiness.com/news/article/332815?utm_source=email&utm_medium=email&utm_campaign=daily)

### Police Foundation Launches New Center for UAS in Public Safety July 26, 2018 News



Ensuring the safety of the public is a core mission for all professional law enforcement agencies. In pursuit of this mission, law enforcement leverages many different types of tools, including new and emerging technologies. One of these latest technologies is small-unmanned aircraft systems (sUAS).

The [Police Foundation](#) is launching a new [Center](#) for law enforcement agencies considering the use of small unmanned aircraft systems. As sUAS technology continues to advance and its use becomes increasingly widespread, the goal of the Police Foundation Center for Unmanned Aircraft Systems in Public Safety is to help law enforcement navigate the equally important community policing aspects of adopting the technology, **including community concerns** related to privacy and civil rights, transparency and accountability, the development of policy and procedure, and operational safety. We conduct scientific research to examine the real-world





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challenges of policing and public safety, and work closely with policy staff in the translation of scientific findings and the development of evidence-based recommendations for the field.

The website is intended as a resource to help law enforcement agencies make an informed decision on whether to acquire sUAS, and if they do, how to develop policies and procedures that will help **garner public support, avoid pitfalls, and build community trust**. The website is also intended to provide insight for the public on the advantages of sUAS for public safety, and the many considerations that go into sUAS program implementation.

[http://uasweekly.com/2018/07/26/police-foundation-launches-new-center-for-uas-in-public-safety/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_newsletter\\_2018\\_07\\_26&utm\\_term=2018-07-26](http://uasweekly.com/2018/07/26/police-foundation-launches-new-center-for-uas-in-public-safety/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_26&utm_term=2018-07-26)

## Airbus' Zephyr S Set To Break Aircraft World Endurance Record July 26, 2018 News



Zephyr S, Airbus' High-Altitude-Pseudo-Satellite, **has surpassed the current flight endurance record of an aircraft without refueling of 14 days, 22 minutes and 8 seconds** and continues to pioneer the stratosphere. The Zephyr aircraft departed for its maiden flight from Arizona, USA on 11th July 2018.

This first flight of the Zephyr S aims to prove and demonstrate the aircraft capabilities, with the final endurance record to be confirmed on landing. Operating in the stratosphere at an average altitude of 70,000 feet, the ultra-lightweight Zephyr has a wingspan of 25 meters and a weigh of less than 75kg, and flies above weather and above regular air traffic. The Zephyr has the ability to stay focused on a specific area of interest (which can be hundreds of miles wide) while providing satellite-like communications and Earth observation services over long periods of time without interruption. Not quite an aircraft and not quite a satellite, but incorporating aspects of both, the Zephyr has the persistence of a satellite with the flexibility of a UAV.

[http://uasweekly.com/2018/07/26/airbus-zephyr-s-set-to-break-aircraft-world-endurance-record/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_newsletter\\_2018\\_07\\_26&utm\\_term=2018-07-26](http://uasweekly.com/2018/07/26/airbus-zephyr-s-set-to-break-aircraft-world-endurance-record/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_26&utm_term=2018-07-26)

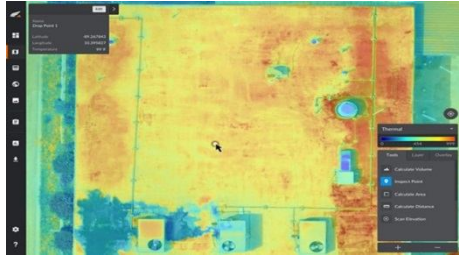




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### Kespry Announces First Drone-Based High-Resolution Thermal Inspection

Capabilities July 25, 2018 Mapping and Surveying



Kespry today announced new high-resolution thermal inspection capabilities for commercial property and industrial facilities. Until today, property managers, owners, and insurers were forced to rely on expensive and inaccurate manual inspections or low-resolution, first-generation drones to determine the health of a roof. By providing a **fully-autonomous**, simple-to-use, and **high-resolution** drone inspection solution, Kespry is reducing the cost of inspections for commercial buildings.

Drone roof inspections including thermal imaging solve two critical problems. First, they identify previously-unseen damage to roofs, mechanical elements, piping, and other infrastructure not apparent in manual inspections.

Kespry's thermal inspection solution is based on radiometric temperature analysis. A specific temperature is displayed for a specific point on a roof. In contrast, non-radiometric thermal drone data simply shows general temperature differences and changes in an area, making it hard to determine whether there is a specific point of damage.

[http://uasweekly.com/2018/07/25/kespry-announces-first-drone-based-high-resolution-thermal-inspection-capabilities/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_newsletter\\_2018\\_07\\_26&utm\\_term=2018-07-26](http://uasweekly.com/2018/07/25/kespry-announces-first-drone-based-high-resolution-thermal-inspection-capabilities/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_26&utm_term=2018-07-26)