



## UAS and SmallSat Weekly News

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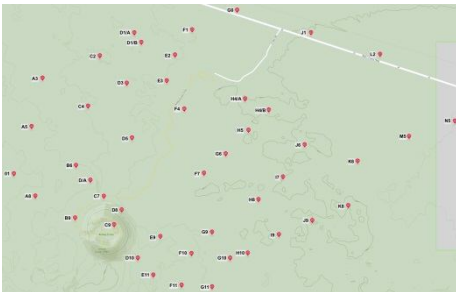


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30Jun18

### Amboy Crater Search and Rescue Mission JUNE 2018

Susan and Bill Schmierer from **Williamsburg, VA** were reported missing while visiting the Amboy Crater, an extinct volcano in San Bernardino County, CA. The couple had failed to return, and their car was found in the parking lot. An initial air search discovered Bill's body 500 yards from the parking lot. Susan's body had not been found. **DroneUp** was contacted by the Schmierer's family and arrived onsite within a few hours. Appropriate permissions were obtained and flight operations commenced on June 20 with the following operations.



- Search Area Identified -- With the guidance of local authorities, DroneUp identified a search area based on environmental conditions and where the first body had been recovered.
- Imagery Collected -- DroneUp pilots captured 360-degree images of the search area.
- Images Crowd Reviewed -- With over eighty images to analyze, DroneUp pilots reviewed the images as they were collected, compiled and processed. Nearly **80 pilots from around the world** volunteered their time and worked around the clock for three days.
- Communication -- The pilot/analysts used encrypted communications to share their findings in real time. Mission coordinators in Virginia and San Diego **monitored the mission chat 24X7**.
- Anomalies Inspected -- Over 50 anomalies in the desert terrain were identified. They were assigned a priority of 1 (we found her) to 5 (probably just rocks but I can't be sure). The data were captured in a cloud-based document shared with all interested parties.
- Coordination with Local Law Enforcement – The mission was launched on June 20 after receiving approval from local law enforcement. It operated from June 20 to June 23 in the desert without local law enforcement but kept them apprised at least daily. On June 24, the San Bernardino Sheriff's Department executed their second ground search, and DroneUp participated. The ground teams arrived before sunup with dogs and multiple teams on ATV's. DroneUp's chief pilot flew missions to re-examine anomalies and captured new images in areas the law enforcement officials speculated the woman could be found.

The lead detective is baffled Susan has not been found. With absolutely no evidence of her or her clothing, other scenarios are being considered. <https://www.droneup.com/about-us/>



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### LEICA ANNOUNCES FASTER 3D MAPPING AIBOT UAV SYSTEM June 29, 2018



Digitizing visual construction data is now simpler and more efficient for contractor use with Leica's new UAV technology. Developed in partnership with DJI, Leica's system allows users to process and analyze millions of data points gathered from above and visualize the data to provide actionable information.

UAV data can then be combined with existing survey technologies, such as TPS, GPS and laser scanning. By meshing with existing survey technologies, such as GNSS and laser scanning, users get a more complete set of information that is easier to interpret. The [Leica Aibot](#) can identify gaps early of with **a level accuracy previously unknown** in the construction industry.

Throughout a project lifecycle of planning, designing and construction, Aibot provides easier access to perform volume calculations and monitor site progress. From creating digital terrain models to stripping, bulk earthworks, trenching, fine grading, paving and compaction, the solution supports easier actuals comparisons providing a more transparent view of site progression monitoring and volume calculations with safer operations to keep projects on schedule. Read [Commercial UAV News' review](#) of the Aibot and its impact on the UAV industry here: Leica Aibot information can be found at <https://leica-geosystems.com/products/uav-systems> <https://www.constructionequipment.com/leica-announces-faster-3d-mapping-aibot-uav-system>

### Colorado Lawmakers Want to Make It a Felony to Fly a Drone over a Wildfire

MARCO MARGARITOFF JUNE 28, 2018



Interfering with police investigations, search and rescue operations, and [firefighting efforts](#) because you just can't help yourself from flying a drone nearby is not only irresponsible and dangerous, but could potentially become a federal crime. [According to The Denver Post](#), several Colorado lawmakers are trying to urge Congress to pass a bill that would make flying unmanned aerial

vehicles over wildfires a felony.

On Wednesday, Senators Cory Gardner (R-Colorado), Michael Bennet (D-Colorado), and Representative Scott Tipton (R-Colorado) introduced the Securing Airspace for Emergency Responders Act, which would fine people for flying UAVs over wildfires without authorization, and potentially send them to jail for a year.



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"When an unauthorized drone flies over a wildfire, it poses a huge threat to aircraft working to suppress the fire and forces them to ground," said Tipton in a statement. Steve Hall, a spokesman for Colorado's office of the U.S. Bureau of Land Management, staunchly echoed that sentiment, claiming that firefighters face enough of a challenge navigating smoky and turbulent conditions while piloting firefighting aircraft, that adding rogue drones to the mix would only increase danger and hamper their efforts. On top of that, Hall explained that once an unauthorized drone is observed during a wildfire, firefighters ground their planes.

While this may come as yet another potential restriction on recreational drone use to some, it should be stated clearly that hampering people from saving lives shouldn't be allowed in any way, especially if the only freedom it robs you of is flying your camera-drone for a few days.

<http://www.thedrive.com/tech/21832/colorado-lawmakers-want-to-make-it-a-felony-to-fly-a-drone-over-a-wildfire>

### **Pitbull military drone-jammer is ready-to-wear** Ben Coxworth 29 June 2018



We've seen portable [drone-jamming devices](#) before, although they tend to take the form of [big guns](#) that would be a hassle to carry for long distances. The **new clip-on Pitbull** is designed to be worn by dismounted soldiers for hours at a time.

Made by Danish firm MyDefense, the Pitbull weighs 775 g/1.7 lb (*not counting the battery*), and can reportedly run for up to 20 hours in standby or for two hours when jamming.

Users can manually activate the device, causing its internal directional antennas to emit radio signals in the 2.4GHz, 5.8GHz and GNSS frequency bands up to a range of 1 km (0.6 miles). These signals will reportedly disrupt those being used to remotely control an enemy drone, while not interfering with the soldier's own radio communications system.

The device can also be hooked up to MyDefence's recently-released Wingman 103 wearable drone *detector*, which will **automatically** cause the Pitbull to start jamming when the control and/or video signals of an incoming drone are picked up. *It* adds an additional 735 g of weight (1.6 lb), and has a range of up to 2 km (1.2 miles). <https://newatlas.com/pitbull-wearable-drone-jammer/55266/>



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### Police train with DJI Mavic for school shootings! July 1, 2018 Thomas Luna



Everyday drones like the DJI Inspire and Mavic series are commonly used for aerial photos and videos, but now fairly low-priced consumer quadcopters are helping law enforcement train for school shootings.



In a response team exercise, Mansfield Police in Texas used a Mavic with propeller guards to peek around corners. Drone Pilot and Detective Barry Moore **flew a Mavic ahead of a squad** that searched rooms for the shooter and signaled when it was clear to approach an area via radio. To make the simulation more

realistic, volunteer kids and teachers ran across school halls. There were also mannequins placed on the floor to represent wounded victims. Once Moore spotted the shooter, he warned the squad and they took him down with paintball markers.



When ABC Journalist Gio Benitez asked Moore what was going through his mind before the drone went through the doors, the drone pilot

replied, "Keep the officers that are coming in safe. Make sure I can keep eyes on the bad guy, suspect, and make sure that they're not walking into something that is going to get them killed." It'll only be a matter of time before drones become a regular tool for the police, especially since their low price point and advantages are undeniable.

<https://www.wetalkuav.com/police-trains-with-dji-mavic-for-school-shootings/2/>

2Jul18

### DoD Establishes New Joint Center to Advance AI Tech Jane Edwards July 2, 2018 DoD, Latest News



The Defense Department has formed a new center that will oversee artificial intelligence efforts across services and DoD **amid efforts of China and Russia to dominate AI**, Breaking Defense [reported Friday](#).

Deputy Defense Secretary Patrick Shanahan wrote in a memo released Thursday the joint artificial intelligence center will report to Dana Deasy, DoD chief information officer,

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and develop a set of common AI standards, reusable technology, shared data and processes for the Pentagon.

The services and other agencies within the Pentagon will coordinate with the CIO each AI project that is worth more than \$15 million annually and selected AI projects will **immediately** get fiscal 2018 funds to speed up their implementation under JAIC, which Shanahan said will ensure AI safety and military ethics.

The document states that the \$15 million threshold will be assessed on an annual basis as "investments in AI mature" and that JAIC will also work with other agencies, industry, academic institutions and allies to advance the technology. <http://www.executivegov.com/2018/07/report-dod-establishes-new-joint-center-to-advance-ai-tech/>

### Milestone coming up for Vahana prototype TOM RISEN JUNE 28, 2018



*TRANSITIONING FROM VERTICAL TO FULL SPEED HORIZONTAL FLIGHT HAS SNAGGED PAST AIRCRAFT DESIGNS.*

AIAA AVIATION Forum, Atlanta — August won't be a sleepy month for A3, the Silicon Valley arm of Airbus that plans to build a fleet of single-passenger, automated aircraft called Vahanas.

If all goes as planned, the company will for the first time transition a full-scale prototype of the aircraft from vertical to horizontal flight. The prototype, called Alpha One, will do this by tilting its wings, which have electrically driven propellers distributed across them.

The company started flight tests with Alpha One in January at the company's site in Pendleton, Oregon. So far, the company has flown a subscale model through the transition. A3 envisions Vahanas being available to **fly passengers around a city** or from downtown to the suburbs as early as **2022**, but the exact timing depends on flight testing and certification for safety. <https://aerospaceamerica.aiaa.org/breakthrough-milestone-coming-up-for-vahana-prototype/>



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**Xcel pioneers utility drone inspections** Kevin Robinson-Avila / Journal Staff Writer Monday, July 2nd, 2018 at 12:02am



ALBUQUERQUE, N.M. — Sometime next year, New Mexicans could see Xcel Energy drones flying above power lines and utility infrastructure around the state.

The company received an FAA approval in April to conduct tests this summer, making it **the first utility nationwide to pioneer beyond-line-of-sight drone operations**, said Kent Larson, Xcel vice president and group president for operations.

Drones could **cut expenses by 80 percent** compared with choppers, and 60 percent compared with foot patrols, Larson said. "Drones can get up really close," Larson said. "You can even see interference underneath lines."



*Harris Corp.'s unmanned helicopter conducts an aerial inspection of a solar facility for Xcel Energy at the Northern Plains UAS Test Site.*

The company has experimented with in-sight drone flights since 2015, inspecting more than 1,000 miles of transmission lines. It uses ground chase vehicles and choppers to maintain line of sight.

It also inspects turbine blades on wind farms with drones. That's something ground crews usually do with binoculars. When they find problems, they stop the turbines and send a person up the tower to rappel down to the blade for photos. "With a drone, you can get within a few feet of problem spots and take photos at many angles," Larson said..

<https://www.abqjournal.com/1191726/xcel-out-front-on-drone-use-for-inspections.html>

**Commercial drones taking off** Kevin Robinson-Avila / Journal Staff Writer Monday, July 2nd, 2018



Starting this summer, solar-powered drones from New Mexico will soar above raging wildland blazes to offer a critical eye in the sky to firefighters battling flames below.



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*Silent Falcon flight operations director Trevor Briggs shows how the drone's infrared camera attaches to the aircraft's belly*

The drones, made by Albuquerque-based Silent Falcon UAS Technologies, are part of a fleet of unmanned aerial systems being **deployed for the first time** this year under a new U.S. Department of Interior contract for air support companies to dispatch commercial drones as needed to wildfires in all 50 U.S. states.

Until now, government agencies permitted only small, helicopter-like drones, or hovercraft, to fly near fires. The Silent Falcon, however, is a winged plane **built to fly long distances for hours on end**, providing detailed, real-time imaging of everything in a broad swath of area below. It's equipped with infrared cameras and other sensors that allow it to operate in adverse conditions, enabling it to see through smoke from wildfires and identify hot spots.



*Company CEO John Brown with the fully-assembled Silent Falcon. Brown launched Silent Falcon UAS Technologies in 2010 in Albuquerque.*

"A few years ago, drones were a pioneering concept that elicited interest with skepticism, but that's entirely gone away," Brown said. "The use of robotic planes is now fully accepted. **It's phenomenal how fast it's changed.**" <https://www.abqjournal.com/1191727/nm-companies-are-taking-to-the-skies.html>

## Police drone pays its way as court hears how equipment is used to bust £50k cannabis farm

APPLICATION HEADLINE NEWS EMMA CALDER JULY 2, 2018



Lincolnshire Police's drone unit has proved the value of drones in crime fighting applications by providing vital evidence that led to the conviction of a cannabis farmer.

The unit gave insight into the operation saw Mark Lovell, 54, jailed for three years for producing cannabis. The cannabis farm was discovered after police carried out searches using a drone.

Inspector Ed Delderfield said: "Where this man lived was surrounded by trees and bushes, so it was actually like a compound. Our intelligence officers spoke with our drone operators and asked if our drone's thermal imaging could help, we agreed this could work and started our





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operation at 2am one morning." The unit flew the drone 400ft across an open field, before hovering 50m from the property where it was able to view an 'obvious' heat source. The filming from the drone took one minute and 20 seconds, and it was only in the air for five minutes from start to finish.

Delderfield added: "It was great to be able to show this evidence in court as it provides a visual that couldn't really have been done in any other way. Admittedly, the NPAS helicopter could have done this, but this would have been at a cost of about £3,000 per hour, and we did this as part of our routine duties. All we had to do is charge the drone up.

<http://www.commercialdroneprofessional.com/police-drone-pays-its-way-as-court-hears-how-equipment-is-used-to-bust-50k-cannabis-farm/>

### Department of Homeland Security seeks industry partners to test sUAS GPS integrity July 2, 2018 Philip Butterworth-Hayes UAS traffic management tenders



The U.S. Department of Homeland Security (DHS) Science and Technology Directorate (S&T) has a multi-year program to address GPS vulnerabilities in sUAS by conducting assessments, developing mitigations, exploring complementary timing technologies and engaging with industry through outreach events and meetings. DHS S&T will host a series of opportunities for stakeholders to demonstrate equipment in unique live-sky signal environments that are only legally possible to create under controlled conditions authorized by the U.S. Government.

DHS S&T invites sUAS and sUAS GPS equipment manufacturers to submit applications for participation to the 2018 GPS Equipment Demonstration for sUAS event. The purpose of this event is to demonstrate equipment in a rarely available live-sky spoofing environment. The data collected by participants in such an environment will help to inform the development of mitigations in future equipment revisions and firmware updates and to foster adoption of mitigations and best practices. Solicitation number: 70RSAT18RFI000012 Deadline: 3 August 2018 <https://www.unmannedairspace.info/uas-traffic-management-tenders/department-homeland-security-seeks-industry-partners-test-suas-gps-integrity/>

### Flying, diving drones trial to automate Great Barrier Reef surveys George Nott Computerworld 02 July, 2018



Researchers from the Australian Institute of Marine Science (AIMS) have this week returned from a 10 day mission on the *Research Vessel Cape Ferguson* during which they trialed the use of underwater and aerial drones to



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conduct automated surveys of the Great Barrier Reef.

One aim of the mission was to trial the ability of aerial drones to conduct reef surveys.



"We did some revolutionary stuff, we flew a 25kg hyperspectral camera with our large drone off our research vessel, and we flew it over a coral transect on John Brewer Reef, which is one of our long term monitoring sites.

The drone is able to observe reef structure and also measure coral bleaching. Previously aerial surveys were done using images taken from a light aircraft. "It will allow for the acceleration of data collection and processing," Olsen added.



The use of autonomous systems is not a novelty, but a necessity for the institute, Bainbridge said.

"We have no choice because the scale of the problem we're trying to deal with is beyond our physical human resources. The Great Barrier Reef is the size of Italy. And so if you want the status of vineyards in Italy – that's not a trivial problem. We're trying to do the same sort of thing," he said. <https://www.computerworld.com.au/article/643187/flying-diving-drones-trial-automate-great-barrier-reef-surveys/>

3Jul18

**Insitu contracted to deliver six ScanEagle UASs to Lebanon** Gareth Jennings, London - IHS Jane's Defence Weekly 02 July 2018



The US Department of Defense (DoD) has contracted Insitu Inc to deliver an additional six ScanEagle unmanned aircraft systems (UASs) to Lebanon.

The USD8.2 million Foreign Military Sales (FMS) contract includes related support equipment, training, site activation, technical services, and data for the government of Lebanon. Work is expected to be completed in June 2020.



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One UAS typically comprises up to 12 air vehicles as well as associated pneumatic launchers and Skyhook recovery apparatus, meaning that this latest contract could cover as many as 72 ScanEagle unmanned aerial vehicles (UAVs).

The ScanEagle aircraft is 1.2 m long, has a wingspan of 3 m, and is launched using a pneumatic catapult and recovered by the company's Skyhook system. It has a service ceiling of 10,000 ft and an endurance of more than 20 hours. The ScanEagle is equipped with electro-optic, infrared, and high-resolution video cameras that enable the operator to track stationary and moving targets. <http://www.janes.com/article/81442/insitu-contracted-to-deliver-six-scanegale-uass-to-lebanon>

### Record-Holding Endurance UAS Gets New Owner *Jul 2, 2018* [Graham](#)

[Warwick](#) | *Aerospace Daily & Defense Report*



Vanilla Aircraft, a U.S. developer of small unmanned aircraft systems (UAS) with ultra-long endurance, has been acquired by a joint venture between Platform Aerospace and an unnamed third party. Platform Aerospace in Hollywood, MD, conducts rapid aircraft and UAV modification and system integration. Vanilla Aircraft in Falls Church, VA, announced on October 26,

2017, their VA001 aircraft completed a five-day 7,000 mile flight - **the longest unmanned internal combustion powered flight in history**. The 36-foot wingspan, diesel-powered aircraft landed with three days of fuel remaining on board, successfully meeting its goal of a five day flight. <http://aviationweek.com/awindefense/record-holding-endurance-uas-gets-new-owner>  
<http://vanillaaircraft.com/news.html>

### FAA Surveys Commercial Drone Operators *Gordon Gilbert July 2, 2018*

If you've registered a commercial drone, **the FAA wants to hear from you**. On June 19, the agency sent an e-mail questionnaire to the owners of nearly 100,000 drones that have been registered as a commercial unmanned aircraft system. The survey population also includes government departments and other users, except recreational users and hobbyists.

The goal is to collect information on drone flight activities under the [FAR Part 107](#) small drone rule (applicable to unmanned aircraft under 55 pounds). The FAA said the data will "improve the services it delivers to the UAS community."



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Survey questions include; number of drones registered, number and types of missions completed in 2017, primary locations where the operator flies, and types of waivers requested. The survey also asks how operators want to get information about drone-related issues from the FAA, and how satisfied they are with drone news channels they use now.

Responses to the questionnaire are voluntary, anonymous, and entered electronically. The survey will take about **10 minutes** to complete. <https://www.ainonline.com/aviation-news/aerospace/2018-07-02/faa-surveys-commercial-drone-operators>

### **Amazon just received a patent for hijack-proof delivery drones.** DIAMOND NAGA SIU



The company filed [a patent](#) titled "Hostile takeover avoidance of unmanned vehicles" two years ago, and it was finally approved last week. The patent is specifically designed for delivery vehicles, and it's aimed at preventing "nefarious individuals" from taking over the company's drones.

Although there's no guarantee that this patented technology will ever see the light of day, it's still considered **a major development** — especially for an e-commerce giant like Amazon — since it could revolutionize the company's delivery capabilities.

Amazon discussed the possibility of having drones deliver people's goods within an hour, so this is one step closer to that goal. The company's other drone-related patents include [self-destruction](#) when a failure is detected and drones that can [respond](#) to gestures and voice commands. [https://mashable.com/2018/07/02/amazon-drone-patent-hacker-proof/?utm\\_cid=mash-com-Tw-main-link#xcsKruEWTiqT](https://mashable.com/2018/07/02/amazon-drone-patent-hacker-proof/?utm_cid=mash-com-Tw-main-link#xcsKruEWTiqT)

### **Travis Air Force Base Replaces Fireworks with Intel Drone Light Show** Miriam

McNabbon: July 03, 2018



*Two Intel drone technicians troubleshoot a choreographed drone display ahead of a 4th of July showing celebrating the holiday June 28 at Travis Air Force Base, Calif. This year's July 4th marks the 242nd year since the creation of the United States.*

The United States celebrates Independence Day on July 4th, and since 1777 the day has been



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marked by outdoor fireworks shows. This year, tradition changes as Intel will provide a choreographed light show performed (weather permitting) at Travis Air Force Base in California.

"In celebration of July Fourth and Travis Air Force Base's 75<sup>th</sup> anniversary, 500 Intel Shooting Star drones will dance across the nighttime sky in a choreographed aerial routine that honors active military and veterans," says a release from Intel's newsroom.

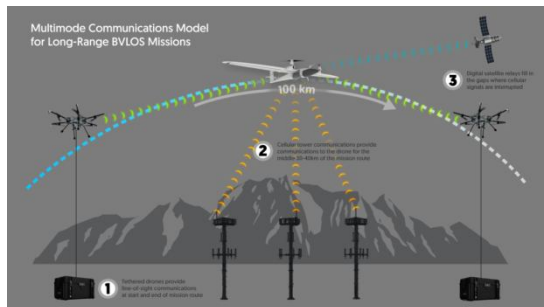
*"We are excited to collaborate with the Travis Air Force Base to celebrate the July Fourth holiday by bringing a new form of nighttime entertainment to honor the military and their families. I am looking forward to seeing the joy and excitement that our drone light show brings to the spectators."*

–Anil Nanduri, vice president and general manager, Intel drone team

<https://dronelife.com/2018/07/03/travis-air-force-base-replaces-fireworks-with-intel-drone-light-show/>

## Kongsberg UAS Airspace Awareness Software Selected for BVLOS Flight Trials 26

Jun 2018 | Mike Rees



[Kongsberg Geospatial](#) has announced that its IRIS technology will be used by three of the four winning teams selected by Transport Canada to undertake unmanned aerial system (UAS) beyond visual line of sight (BVLOS) trials.

The intent of these BVLOS proof-of-concept trials is threefold: to provide Transport Canada and industry with BVLOS operating experience and data; to validate technologies to allow for future routine BVLOS operations; and to inform the development of BVLOS regulations in Canada.

The Kongsberg Geospatial IRIS display technology **integrates drone telemetry and sensor data** feeds to enable multiple drones to be monitored simultaneously by a single operator and provides real-time calculation of aircraft separation and communications line-of-sight to enable BVLOS operations. IRIS provides real-time 2D and 3D visualization of airborne track and weather data, as well as geo-fencing capabilities and cues and alerts for loss of separation.

[http://www.unmannedsystemstechnology.com/2018/06/kongsberg-uas-airspace-awareness-software-selected-for-bvlos-flight-trials/?utm\\_source=Unmanned+Systems+Technology+Newsletter&utm\\_campaign=b45a027e48-eBrief\\_2018\\_July\\_3&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-b45a027e48-119747501](http://www.unmannedsystemstechnology.com/2018/06/kongsberg-uas-airspace-awareness-software-selected-for-bvlos-flight-trials/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=b45a027e48-eBrief_2018_July_3&utm_medium=email&utm_term=0_6fc3c01e8d-b45a027e48-119747501)





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### **Amazon has an idea to stop its delivery drones from being hijacked** *Trevor Mogg* *July 2, 2018*

With package-carrying unmanned aerial vehicles (UAVs) flying out of Amazon warehouses to customer homes, there could be occasional attempts by ne'er-do-wells to bring down the flying machines in order to steal the goods.

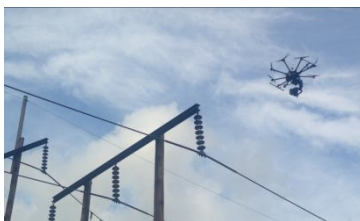


Amazon says in [the patent](#): "As the use of UAVs continues to increase, so does the likelihood of hostility towards UAVs. Such hostility may come in the form of attacks brought for any number of purposes (e.g., steal the UAVs and their payloads, crash the UAVs, and otherwise cause disruption to the operation of the UAVs)."

"Using these attacks, nefarious individuals and/or systems may be able to obtain control of the UAVs by hacking the communication signals being sent to the UAVs from a controller and/or being sent by the UAV to the controller. Such attacks "could cause the UAVs to operate unsafely and could also result in considerable financial loss for their operators."

The patent explores the idea of **sending a "heartbeat" signal** from the controller to the drone every few seconds. If the heartbeat detects interference from a third party, the drone will automatically switch from mission mode to safety mode, prompting it to make efforts to either re-establish communication with the controller, regain control over the drone in the event of a hostile takeover, or possibly land the machine at a safe location where it can be rebooted or collected. [https://www.digitaltrends.com/cool-tech/amazon-patent-describes-hijack-proof-delivery-drones/?utm\\_source=sendgrid&utm\\_medium=email&utm\\_campaign=cool-tech](https://www.digitaltrends.com/cool-tech/amazon-patent-describes-hijack-proof-delivery-drones/?utm_source=sendgrid&utm_medium=email&utm_campaign=cool-tech)

### **Virginia Beach's HAZON to sell Aeryon drones as part of new partnership** *Trevor Metcalfe* *trevor.metcalfe@insidebiz.com Jun 29, 2018*



HAZON Solutions, a Virginia Beach aerial drone service company founded in 2014, will be able to sell Aeryon drones as part of a recently-announced partnership deal. HAZON will be taking over sales and business development efforts for **Aeryon in North America**, according to Ed Hine, vice president of business



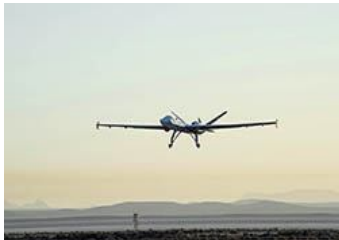
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development and marketing at HAZON.

HAZON helps clients break into using aerial drones – especially work on infrastructure like power lines or bridge inspections. The company has also recently diversified into training and consulting work for organizations interested in drones, with a focus on Fortune 500 companies.

Aeryon, which was founded in 2007 in Ontario, Canada, builds high-performance drones for military, public safety and commercial customers. Its drones were used to help Libyan rebels spy against enemies in 2011 and aid with the Hurricane Irma response in 2017, according to the company. [https://pilotonline.com/inside-business/news/small-business/article\\_50049070-7bcc-11e8-b221-1b7b94f8ee90.html?spMailingID=13800581&spUserID=MTI4MTcwMjgzOTQxS0&spJobID=1440162266&spReportId=MTQ0MDE2MjI2NgS2#utm\\_source=pilotonline.com&utm\\_campaign=%2Fnewsletters%2Finside-business%2Ftuesday%2F&utm\\_medium=email](https://pilotonline.com/inside-business/news/small-business/article_50049070-7bcc-11e8-b221-1b7b94f8ee90.html?spMailingID=13800581&spUserID=MTI4MTcwMjgzOTQxS0&spJobID=1440162266&spReportId=MTQ0MDE2MjI2NgS2#utm_source=pilotonline.com&utm_campaign=%2Fnewsletters%2Finside-business%2Ftuesday%2F&utm_medium=email)

## **JUNE UAS FLIGHT WITH NO CHASE PLANE POINTS TO FUTURE, NASA AND GA-ASI SAY** AUVSI NEWS JUN 28, 2018



The June flight of a large unmanned aircraft in the National Airspace System without the use of a chase plane took “thousands of hours” and a tightly integrated detect and avoid system, NASA and industry officials said on Thursday.

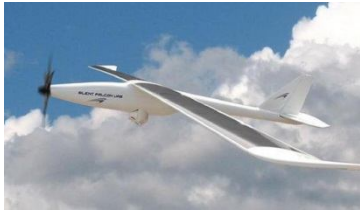
On June 12, NASA and partners General Atomics Aeronautical Systems, Honeywell and the Federal Aviation Administration conducted the demonstration, a 2.5-hour flight not far from Los Angeles. The aircraft was a MQ-9 Predator, which NASA has operated for years as the Ikhana, which is based at Armstrong Flight Research Center in Edwards, California. Ikhana is 36 feet long and has a wingspan of 66 feet.

It carried an airborne radar developed by GA-ASI; a Honeywell-developed detect-and-avoid and Traffic Alert and Collision Avoidance System tracking system; Automatic Dependent Surveillance-Broadcast in and out systems; and a pilot interface with a “conflict prediction” system. This allowed it to combine collision avoidance with a remain-well-clear function, Kunzi said, and was “**more capable than a pilot’s ability to see other aircraft** in many ways.” <http://www.auvsi.org/june-uas-flight-no-chase-plane-points-future-nasa-and-ga-asi-say>



## UAS and SmallSat Weekly News

### **Solar-Powered Drones to Aid Wildland Forest Fires** KEVIN ROBINSON-AVILA JULY 2, 2018 ALBUQUERQUE JOURNAL, N.M.



July 02 -- Starting this summer, solar-powered drones from New Mexico will soar above raging wildland blazes to offer a critical eye in the sky to firefighters battling flames below.

The drones, made by Albuquerque-based Silent Falcon UAS Technologies, are part of a fleet of unmanned aerial systems being deployed for the first time this year under a new U.S. Department of Interior contract for air support companies to dispatch commercial drones as needed to wildfires in all 50 U.S. states. One of those companies, Montana-based Bridger Aerospace, subcontracted Silent Falcon to deploy its **solar-powered drones** whenever the feds call for assistance.

Until now, government agencies permitted only small, helicopter-like drones, or hovercraft, to fly near fires. The Silent Falcon, however, is a winged plane built **to fly long distances for hours on end**, providing detailed, real-time imaging of everything in a broad swath of area below. It's equipped with infrared cameras and other sensors that allow it to operate in adverse conditions, enabling it to see through smoke from wildfires and identify hot spots.

Federal authorization to use such unmanned systems marks **a new milestone** in the emerging commercial drone industry, said Silent Falcon CEO John Brown. <https://www.firehouse.com/tech-comm/drones/news/21011822/solar-powered-drones-assist-wildland-firefighters-wildfire>

4Jul18

### **AeroVironment Collaborating with NASA's JPL to Build First Drone to Fly on Mars** July 3, 2018 News



At a briefing held Wednesday at New York City's NASDAQ Marketsite, [AeroVironment, Inc.](#) revealed its role in collaborating with NASA's Jet Propulsion Laboratory in Pasadena, Calif. to build the drone helicopter recently selected by NASA/JPL's Mars Exploration Program and displayed a model of the [Mars Helicopter](#), which is planned to fly on Mars in less than three years.



## UAS and SmallSat Weekly News

Flying at nearly 100,000 feet on Earth is much like flying on the surface of Mars – same air density – so AeroVironment used airfoil design principles and simulation tools the company learned from high-altitude flights and incorporated them into the Mars helicopter design.

[http://uasweekly.com/2018/07/03/aerovironment-collaborating-with-nasas-jet-propulsion-laboratory-to-build-first-drone-the-mars-helicopter-to-fly-on-mars/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_newsletter\\_2018\\_07\\_03&utm\\_term=2018-07-04](http://uasweekly.com/2018/07/03/aerovironment-collaborating-with-nasas-jet-propulsion-laboratory-to-build-first-drone-the-mars-helicopter-to-fly-on-mars/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_03&utm_term=2018-07-04)

### **AUVSI REPORT SHOWS PROPOSED DEFENSE BUDGET FOR UNMANNED VEHICLE SYSTEMS TOTALS \$9.6 BILLION** JUN 27, 2018 Tom McMahon, [tcmahon@auvsi.org](mailto:tcmahon@auvsi.org), (571) 255-

**7786 *Authorized spending for military unmanned technologies increases by 28 percent***

ARLINGTON, Va. – Proposed spending for unmanned vehicle systems by the U.S military totals



\$9.6 billion for 2019, an increase of 28 percent over last year.

In a report released today, AUVSI reviewed funding proposals for unmanned systems and associated technologies that were included in the President's Budget and the National Defense Authorization Act for fiscal year 2019.

- The Navy requested the largest funding increase among the services, with about \$1 billion more requested than when compared to 2018.
- Relative to domain of operation (i.e. air, ground or maritime), unmanned aircraft systems (UAS) have the largest funding request at \$7 billion.
- Funding for counter-UAS systems almost doubles from the previous year, with approximately \$1.5 billion for FY2019. Requests for maritime vehicles are approximately \$1.3 billion, while requests for ground robotics are about \$700 million.
- Over 60 percent of cross-domain operations involving air and ground unmanned vehicles are funded by the Army, while over half the projects that involve unmanned vehicles across all domains of warfare (air, ground and maritime) are supported by the Navy.
- Of the seven core technologies that enable unmanned systems operations, the largest proposed investment in FY2019 is for integrated sensors and payloads, followed by navigation and control systems.



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- The full report can be downloaded [here](http://www.auvsi.org/auvsi-report-shows-proposed-defense-budget-unmanned-vehicle-systems-totals-96-billion).  
<http://www.auvsi.org/auvsi-report-shows-proposed-defense-budget-unmanned-vehicle-systems-totals-96-billion>

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### **The U.S. isn't prepared for the growing threat of drones** Kirstjen M. Nielsen July 4

Kirstjen M. Nielsen is secretary of homeland security.



Drone technology offers the potential to change our world — from enabling historic transformations in e-commerce to faster emergency response. But the technology also has a dark side. It can be used to spy on us, to threaten our critical infrastructure, or to attack crowds and public places.

For years, the Department of Homeland Security has worried about the dangers of unmanned aerial systems, and we have sought the legal authority to protect Americans against corrupted aerial devices. Today I have a pressing message for Congress: **Time is running out.**

As secretary of homeland security, I can tell you that threat is outpacing our ability to respond. Without congressional action, the U.S. government will remain unable to identify, track and mitigate weaponized or dangerous drones in our skies.

Just last month, officials at U.S. Customs and Border Protection [reported](#) a spike in the use of drones at our borders. Criminals are also using them to smuggle drugs. Worse still, terrorist groups such as the Islamic State aspire to use armed drones against our homeland and U.S. interests overseas.

Unfortunately, the laws on the books today were not written with weaponized drones in mind. As a result, the nation's two biggest law enforcement departments — DHS and the Justice Department — have their hands tied when it comes to protecting Americans.

Some in Congress recognize these problems and have stepped up. The Defense Department already has similar authorities to protect U.S. forces overseas and certain domestic facilities. But it's time we had them to protect Americans here at home. The House and Senate should approve a legislative fix at the earliest possible opportunity.

Drones will soon become a part of everyday life. Before then, let's make sure they don't become an everyday threat. <https://www.washingtonpost.com/opinions/the-us-isnt-prepared-for->



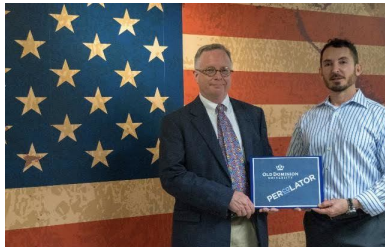


## UAS and SmallSat Weekly News

[the-growing-threat-of-drones/2018/07/04/30cc2a76-7eef-11e8-b9f0-61b08cdd0ea1\\_story.html?utm\\_term=.e38ff2e2a2fa](https://the-growing-threat-of-drones/2018/07/04/30cc2a76-7eef-11e8-b9f0-61b08cdd0ea1_story.html?utm_term=.e38ff2e2a2fa)

### New partnership aims to boost Hampton Roads' entrepreneurial ecosystem

Sandra J. Pennecke [sandra.pennecke@insidebiz.com](mailto:sandra.pennecke@insidebiz.com) Jul 3, 2018



*Morris Foster, Old Dominion University's vice president for research and innovation, and Bobby Wright, owner and operator of Percolator, signed a memorandum of understanding laying out the terms of a partnership between Percolator and ODU's Entrepreneurship and Economic Development Group.*

Good news was unveiled at Old Dominion University's monthly unWINEd event June 27 at Percolator's Monticello campus. The announcement came in the form of a signed memorandum of understanding laying out the terms of a partnership between **Percolator and ODU's Entrepreneurship and Economic Development Group**.

"The MOU between ODU and Percolator proves that we are stronger when we work together," said Mallory Tuttle, program manager at ODU's Strome Entrepreneurial Center. "Instead of two entrepreneurial resources competing for members we have elected to work together to help our local entrepreneurs and build our entrepreneurial ecosystem."

The partnership will provide Norfolk Innovation Center clients with the opportunity to use the other entities' co-working spaces. "We will also collaborate on entrepreneurial programming and host joint events to help expand the network of our members beyond that of just their 'home base' with ODU or Percolator," Tuttle said.

Bobby Wright, a developer and owner/operator of Percolator, recently expanded the co-working space into a second, 20,000-square-foot location at 253 Monticello Ave. The first space, at 259 Granby St., reached capacity within six months of opening its doors.

Wright said the goal at Percolator is to facilitate relationships. "It's all about innovation and collaboration," he said, adding the relationship that has developed with ODU will help them to be both a platform and a resource not just on a state level, but nationally.

[https://pilotonline.com/inside-business/news/entrepreneurs-innovation/article\\_9237cec8-7afd-11e8-ae46-27396d94ceef.html?spMailingID=13807721&spUserID=MTI4MTcwMjgzOTQxS0&spJobID=1440251579&](https://pilotonline.com/inside-business/news/entrepreneurs-innovation/article_9237cec8-7afd-11e8-ae46-27396d94ceef.html?spMailingID=13807721&spUserID=MTI4MTcwMjgzOTQxS0&spJobID=1440251579&)



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### China Is on the Fast Track to Drone Deliveries Bloomberg News July 3, 2018

JD.com is racing companies from across the world to develop unmanned aerial vehicles with the strength, range and reliability to deliver goods on a large scale and solve the expensive "last-mile" problem for couriers. What sets China's efforts apart is its ability to assemble all the other parts needed for drone deliveries, including the regulations, infrastructure and the world's biggest e-commerce market.



Last year, the Civil Aviation Administration of China gave the [go-ahead](#) for JD.com and SF Holding Co., the country's biggest express-delivery company, to start sending packages by drone **in certain rural areas**.

The idea is to build a network that includes not only small drones for final delivery, but **a whole system**, including large autonomous fixed-wing planes that take off from small airports or landing strips to ferry

bulk shipments between warehouses.

China's killer advantage is the market. The country has both the advanced drone technologies and millions of consumers living in remote areas that are hard to get to -- sometimes impossible to get to -- by truck. **China had more than 590 million "rural" residents** at the end of 2017, according to the statistics bureau. "People living in mountainous regions hardly accessible by ground transportation also have the right to shop!" said Cui Zheng, a manager overseeing JD's drones program in northwest China. "We are giving them the same shopping experience, same price, by flying drones."

The race for drone deliveries in China is being fueled by competition between JD.com and rival Alibaba. <https://www.bloomberg.com/news/features/2018-07-03/china-s-on-the-fast-track-to-making-uav-drone-deliveries>



## UAS and SmallSat Weekly News

### Company trains drone operators to keep the skies safe June 29, 2018 Joan Tupponce



Tom Walker believes his company, **DroneUp**, can help keep order in the skies while permitting unmanned aircraft systems, or drones, to perform community service. The **Chesapeake-based business** promotes safety in the use of drones through "continuous education" of its operators, he says. Nationwide there are 160,000 certified pilots flying 1 million recreational drones.

"Any company that needs drone services, whether that's video pictures or data, they call us, and we deploy the pilots and gather the data and then process it appropriately and return the results to them." DroneUp is active in **more than 60 countries**.

He launched his app last year four days before Hurricane Harvey hit the Houston area. His initial community of 300 drone pilots shot up to 4,000 users overnight. "We had 400 volunteers show up in Houston," he says.

In April, DroneUp began the Responsible Community Pilot (RCP) program to promote safety and training. It is partnering with the IACDP to provide pilots with education, certification and resources. The program's mobile apps let pilots know where they can fly safely. **By early June, more than 20,000 non-commercial drone pilots were RCP members.** That number is expected to increase to more than 100,000 during the next six months..

<http://www.virginiabusiness.com/news/article/company-trains-drone-operators-to-keep-the-skies-safe>

### REQUEST FOR INFORMATION (RFI) #730-00106-18 for Unmanned Aircraft

#### Systems (UAS) Management Application and Consultation Date of Issue: 7/2/2018

Closing: 7/20/2018, 3:30 PM (Pacific) Mary Wandell, Contract Coordinator  
mary.d.wandell@odot.state.or.us 503-986-2617

The Oregon Department of Transportation utilizes Unmanned Aircraft Systems (UAS) in many of its daily tasks. Since 2015, ODOT's UAS Program has grown to **18 pilots and 14 airframes** and there is a need to create a system to track pilots, missions, and maintenance.

ODOT is searching for an application or system which allows users and pilots to track mission critical items while allowing the UAS Program Manager to monitor system and execute flight approvals through multiple authority levels. In addition to a management application, ODOT has also seen the need for UAS Program consultation to help create ODOT's "Rules of Engagement" and a pilot training program.



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The objective of this RFI is to: • Determine capabilities of existing commercial off the shelf UAS management applications on the market; • Determine UAS program management best practices and specifications; • Determine UAS program training specifications.

[http://bids.findrfp.com/xDocs/6a5d8fe44ffe44228e26040ada95ef1f\\_RFI\\_730-00106-18.pdf](http://bids.findrfp.com/xDocs/6a5d8fe44ffe44228e26040ada95ef1f_RFI_730-00106-18.pdf)

6Jul18

### FAA Seeks Input from Commercial Drone Users Betsy Lillian July 5, 2018



*The Federal Aviation Administration is [collecting](#) information on commercial drone activities under its Part 107 rules.*

On June 19, the FAA sent a questionnaire to everyone who has registered a commercial drone for anything but recreational or hobby use. Most of these owners fly their drones for commercial purposes, but the survey population also includes government departments and other users, the agency says.

The goal is to collect data that will help the FAA **improve the services** it delivers to the unmanned aircraft system community. Responses to the questionnaire are voluntary and anonymous, and the survey will take about 10 minutes to complete, the FAA says.

The questions include areas such as number of drones registered, number and types of missions completed in 2017, primary locations where the operator flies, and types of waivers requested. [https://unmanned-aerial.com/faa-seeks-input-from-commercial-drone-users?utm\\_medium=email&utm\\_source=LNH+07-06-2018&utm\\_campaign=UAO+Latest+News+Headlines](https://unmanned-aerial.com/faa-seeks-input-from-commercial-drone-users?utm_medium=email&utm_source=LNH+07-06-2018&utm_campaign=UAO+Latest+News+Headlines)

### Casey Neistat uses drone to surf Hudson River! July 5, 2018 Thomas Luna



Casey Neistat and Droneworks Studios collaborated to create a summer themed video, which shows footage of the YouTuber surfing down the Hudson River while getting towed by a drone.

With a remix of Frank Sinatra's song called New York, New York playing in the background, Neistat and YouTuber [Dan Mace](#) starts the video by running into the Hudson River with surfboards. Seconds later, the two YouTubers are seen wakeboarding with surfboards.



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Instead of using a drone capable of [lifting a full-grown adult](#), Droneworks Studios used a neat trick to pull Neistat with a cinema drone.

Since the cinema drone is designed to only carry 25 pounds, Droneworks Studios first pulled Neistat with a boat. Once the YouTuber gained momentum from the pull of the boat, Neistat switched grips and grabbed onto the cinema drone's tow rope.



Screenshot from Neistat's video shows the YouTuber getting ready to let go of the boat's tow rope.

<https://www.wetalkuav.com/casey-neistat-uses-drone-to-surf-hudson-river/>