



UAS and SmallSat Weekly News

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Embraer Joins eVTOL Trend Kate O'Connor May 10, 2018



Embraer's tech innovations division, EmbraerX, is working on its first electric VTOL aircraft, the company announced at this year's Uber Elevate Summit. With this **concept design**, the company joins Boeing, Airbus and quite a few others in actively exploring whether there is a future in urban aerial passenger transport

vehicles.

Embraer says its eVTOL design was developed with "extensive interaction with potential urban air travelers about their desired experience" and it looks like they might still be open for input from future customers. Anyone interested can [design their own](#) eVTOL aircraft on the company's website by answering a few questions and picking out preferred features.

Uber Elevate also saw eVTOL concept announcements from Pipistrel and Karem Aircraft. All three companies are working in partnership with Uber to develop air taxis for Uber's [UberAIR aerial ridesharing venture](#). Uber hopes to begin commercial aerial transport services in 2023. <https://www.avweb.com/avwebflash/news/Embraer-Joins-eVTOL-Trend-230806-1.html>

DHS Contract Will Help Drones Automatically Spot Border Threats JACK CORRIGAN

MAY 10, 2018



This photo made with a drone, shows the U.S. Mexico border fence as it cuts through the two downtowns of Nogales, Ariz.

The Homeland Security Department is investing in drone technology that could **keep border patrol agents safer** in the line of duty.

The DHS Science and Technology Directorate on Tuesday awarded a **\$200,000 contract to Intelleuron** to develop an adaptive reconnaissance platform that allows small unmanned aerial systems to better spot danger on the ground.



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The technology can automatically locate potential threats like armed smugglers and operate across every type of terrain and weather. Customs and Border Protection plans to use the system to support operations in the most remote regions of the border.

Intelleuron, an Idaho-based software company that develops machine learning and autonomous vehicle navigation systems, is the most recent group to join the [Silicon Valley Innovation Program](#), the agency's internal startup accelerator.

<https://www.nextgov.com/emerging-tech/2018/05/dhs-contract-will-help-drones-automatically-spot-border-threats/148088/>

US Coast Guard requests long-endurance UAV to counter drug and migrant smuggling 10 MAY 2018 FLIGHTGLOBAL.COM GARRETT REIM LOS ANGELES

The US Coast Guard issued a request for demonstrations of long-range, ultra-endurance unmanned aerial vehicles to conduct intelligence, surveillance and reconnaissance missions in US coastal transit zones that are highly trafficked by illegal drug and migrant smugglers.

The requested drone would be land-based, must have the ability to **fly for more than 24h** and a service ceiling of 15,000ft above sea level, according to the Department of Homeland Security's RFP. The UAV's sensor payload must be able to discern activity associated with drug and migrant smuggling aboard anchored and moving maritime targets.

US coastal transit zones include the Caribbean Sea, the Gulf of Mexico and the eastern Pacific Ocean. To surveil these regions, the US Coast Guard is looking for an aircraft with a patrol airspeed of at least 50kt. It must also include maritime payloads such as an electro-optical and infrared full motion video system, a maritime surveillance radar, a radio frequency and direction finding sensor, and a tactical communications radio and data link. The Coast Guard is looking for responses by 5 June. <https://www.flightglobal.com/news/articles/us-coast-guard-requests-long-endurance-uav-to-counte-448504/>

12May18

UAV Industries launches South Africa's First Accredited BVLOS Training News May 11, 2018



UAV Industries has announced the launch of its accredited Beyond Visual Line of Sight (BVLOS) Training Course, open to all drone pilots in possession of a valid Remote Pilot Licence. **First to market in Africa**, the B-VLOS training course is endorsed by both the South

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African Civil Aviation Authority and the International Civil Aviation Organisation.

The advent of BVLOS training in South Africa represents a big step up for both UAV Industries and the SA CAA in terms of international BVLOS operations and standards. There are currently no other African countries within the ICAO states offering a BVLOS endorsement that complies with both ICAO and local regulations. This endorsement allows a correctly certified RPL pilot to now undertake BVLOS operations, ensuring a consistent standard that complies with accepted international aviation standards.

“UAV Industries has been working hand in hand with the SA CAA for the last **two years** to get BVLOS endorsement standards and course contents finalized”, says Ken Venn, Head of Training at UAV Industries. “With no African BVLOS precedent to follow, this has not been an easy process. http://uasweekly.com/2018/05/11/uav-industries-launches-south-africas-first-accredited-bvlos-training/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_05_11&utm_term=2018-05-12”

China Has Already Won the Drone Wars SHARON WEINBERGER MAY 10, 2018



Jordan's Chinese CH-4 drone on display at this year's SOFEX arms show.

AMMAN, Jordan — At a military airfield on the outskirts of the Jordanian capital, three American businessmen stood admiring the star exhibit, which looked eerily familiar: a large drone, armed with weapons under its wings, with a domed front.

“They brought the Predator here,” said one, in reference to the ubiquitous U.S. drone used in wars from Bosnia to Iraq. “**That is not a Predator,**” another countered.

The drone on display was a Chinese unmanned aerial vehicle called **the Rainbow CH-4**, which has quickly spread around the world. Jordan bought the drone in 2015 but displayed it publicly for the first time this year at the Special Operations Forces Exhibition and Conference.

Once upon a time, the sight would have been unthinkable: The MQ-1 Predator and its successor, the more lethal MQ-9 Reaper, were for more than a decade synonymous with armed drones. But that now is changing, not because Beijing has built a better drone but because it



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has been willing to sell them to countries where the United States wouldn't.

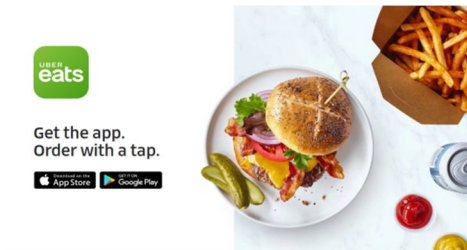
<http://foreignpolicy.com/2018/05/10/china-trump-middle-east-drone-wars/>

Uber Eats aims to use drones to deliver “flying burgers!” May 11, 2018 Thomas Luna



With the approval of the [UAS integration Pilot Program](#), Uber announced plans to use drones to **deliver food in San Diego, California**. Uber’s Chief Executive Officer Dara Khosrowshahi explained that their Uber Eats online food platform will be able to deliver food to doorsteps via courier or drone within five to 30 minutes.

The convenience of purchasing food through an app and having it **delivered to a doorstep within minutes** will redefine the fast food industry.



Customers will be able to place orders using the Uber Eats app. A drone will then drop off food to locals within **five minutes**.

Besides food deliveries via drone, **Uber discussed plans for their passenger drones**, which are also known as [drone taxis](#). Their drone taxis will first be piloted by a human

pilot since safety is a priority. Eventually, **Uber’s drone taxis will be designed to fly autonomously**.



One of Uber’s concept landing sites. These launch pads will have multiple levels and charging stations. Customers will be able to order a ride via app.

<https://www.wetalkuav.com/uber-eats-aims-to-use-drones-to-deliver-flying-burgers-within-30-minutes/>

The rise of insect-inspired drones May 10, 2018 Feilidh Dwyer



There are [273 species of flying insect](#) and among the numerous varieties of flies, mosquitos, wasps, bees and others – each has a slightly different way of flying. Nature frequently inspires designers, architects and technologists. It is not surprise then, that the industry tasked with building all manner



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of flying vehicles look to the insect world for inspiration when it comes to building nano drones.

Insect-inspired drones tend to be significantly smaller than your regular UAVs. Although the likes of the DJI Air is already small at 6.6 inches (168 mm) long, nano drones can be just 1 inch long (25mm).



Different species of flying insect have inspired drone designers of nano drones.

When drones are very small, **the rules of aerodynamics apply differently**. One of the major hurdles that face manufacturers of tiny drones inspired by insects is that their batteries do not last very long.



Prox Dynamics AS of Norway has designed the **Black Hornet Nano**. It is 4 inches x 1 inch and currently in use by German, Dutch, British and Norwegian forces. Its tiny size allows it to land on windowsills or other covert spots to capture images for the operator.

The Hornet is equipped with three cameras (one pointed straight forward, one pointing down and one at a 45 degree angle). This gives the pilot the ability to film and take photos during reconnaissance missions. <https://www.wetalkuav.com/the-rise-of-insect-inspired-drones/>

New US military drone will launch and be recovered mid-air by cargo planes May 9, 2018 Feilidh Dwyer



Last month the US Defense Department military contractor [Dynetics](#) won the right to build several reusable drone prototypes referred to as *Gremlins*.

Dynetics won the contract over other weapons manufacturer such as Lockheed Martin and General

Atomics.

This particular type of drone can be dropped from C-130 Hercules aircraft, deploy *en masse* for a mission and then return and be recovered by the same plane mid-flight. Gremlins are designed to be low-cost, reusable and dispatched in swarms.



How will the drones be collected once they finish their mission?
Dynetics proposes that Hercules planes will lower a "stabilized



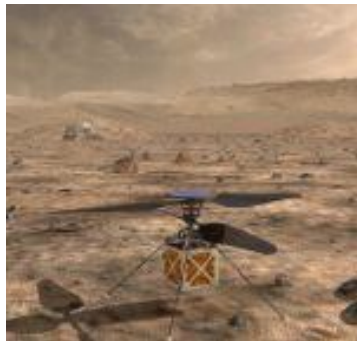
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capture device" (essentially a long cable) that the drone will fly towards (much like a plane refueling). The drones will dock, be powered off and be raised inside the plane and are likely to be stored under the plane's wing. Dynetics was paid **\$40 million** for the contract and will develop drones ready for testing by the end of 2019. <https://www.wetalkuav.com/new-us-military-drone-will-launch-recovered-mid-air-cargo-planes/>

14May18

NASA's Autonomous Rotorcraft to Launch as Part of Mars 2020 Rover Mission

Jane Edwards May 14, 2018 Latest News, Space



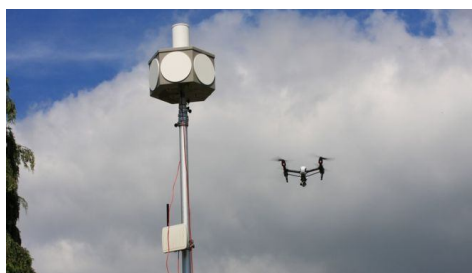
A small unmanned rotorcraft is set to take off with NASA's Mars 2020 rover aboard United Launch Alliance's Atlas V rocket in July 2020 from Cape Canaveral Air Force Station in Florida.

The agency's *Mars Helicopter* is an autonomous aircraft that aims to demonstrate controlled flight on the red planet's thin atmosphere in support of future Mars exploration missions. The rotorcraft has solar cells and a heating platform and will take a 30-day flight test.

"We don't have a pilot and Earth will be several light minutes away, so there is no way to joystick this mission in real time," said Mimi Aung, Mars Helicopter project manager at JPL. "Instead, we have an **autonomous capability** that will be able to receive and interpret commands from the ground, and then fly the mission on its own.

The Mars 2020 rover and the aircraft are expected to arrive at the red planet by February 2021 to carry out geological assessments and evaluate natural hazards and resources as well as collect rock and soil samples. <http://www.executivegov.com/2018/05/nasas-autonomous-rotorcraft-to-launch-as-part-of-mars-2020-rover-mission/>

Southend Airport trials detect 'rogue' drone operators 13 May 2018



London Southend Airport said drones were causing an increased safety risk with up to four sightings in London airspace a week.

The new surveillance technology means it is now possible to detect drones further away from airports. A Southend



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Airport spokeswoman said it also "identifies exactly where the operator is located." This meant there was a "possibility of them being apprehended, something which has previously been almost impossible," she said.

If one was sighted near a critical part of an airport, such as a runway, then the only option was to completely stop operations. "This most notably happened at Gatwick in July 2017, which led to delays for thousands of passengers and considerable costs to the airport."

<http://www.bbc.com/news/uk-england-essex-44099674>

Stadium and team owners see drones as major league threat Michael Laris May 11



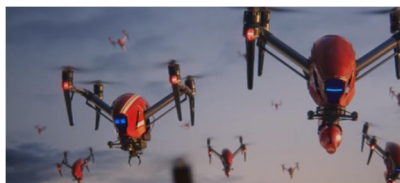
"Federal law prohibits local law enforcement from disarming or disabling drones, even if they are in restricted airspace," said National Football League Senior Vice President Jocelyn Moore. "This loophole in federal law puts the safety and security of millions of sports fans and eventgoers at risk."

The Trump administration on Wednesday tapped 10 pilot projects, from mosquito control in Florida to food delivery in California, that it hopes will offer lessons for how to sharply expand drone use nationwide. But major league teams are increasingly anxious about the more than 1 million drones that government officials estimate are already in use. They are asking Congress to give local law enforcement permission to seize or reroute drones flying over stadiums. And they are trying to get in a position to protect themselves.

The families that own the New York Mets have invested in a Silicon Valley firm, Airspace, that uses artificial intelligence-driven drones that can find and capture other drones. Farzam Kamel, a partner at Sterling VC, an investment arm of the Wilpon and Katz families, said they are working to address the "very rare but devastating threat that can come."

https://www.washingtonpost.com/local/trafficandcommuting/nationalinclude/stadium-and-team-owners-see-drones-as-major-league-threat/2018/05/10/83e0b954-50ad-11e8-84a0-458a1aa9ac0a_story.html?utm_term=.717419188e9d

Budweiser launches 2018 FIFA World Cup ad featuring drones delivering beers May 14, 2018 Thomas Luna



With the 2018 FIFA (Fédération Internationale de Football Association) World Cup scheduled to start in Russia on June 14, sponsor and beer maker Budweiser launched an ad showing

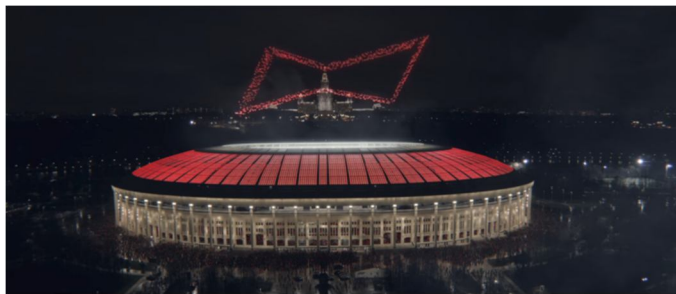
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swarms of beer-carrying drones delivering brewskies to people while travelling through different countries.

The ad starts by showing Budweiser as the official beer of the 2018 FIFA World Cup. Then the drones, which heavily resembles a [DJI Inspire 2](#), each carried beer in the form of a bottle or a keg from the factory in St. Louis, USA, to their target in Moscow, Russia. Once all the beers were delivered, **the drones converged in the air and formed a Budweiser logo**. The [drone light show](#) was cheered on by the attendants, and the ad ends with its campaign phrase: "Light Up the FIFA World Cup."



2018 FIFA World Cup is estimated to be watched by billions!

According to [Adweek](#), Budweiser's VP Global Marketer Brian Perkins said, "This football World Cup is estimated to be **the most watched event in the history of the**

human race, reaching billions of people." <https://www.wetalkuav.com/budweiser-launches-2018-fifa-world-cup-ad-featuring-drones-delivering-beers/>

Intel to Deploy Drones for Great Wall of China Restoration Project Michael

Cheng May 13, 2018



Intel will deploy its quadcopters to help restore parts of the [Great Wall of China](#), using a fleet of Falcon 8+ drones and artificial intelligence. Initially, the restoration project will focus on the Jiankou section, located roughly 45 miles from Beijing. [UAVs](#) are suitable for inspecting this part of the massive structure, as **the area is very inaccessible**.

Rugged terrain, loose rocks and steep inclines prevent human workers from making a safe approach to the location. Drones equipped with cameras provide a safe alternative, while decreasing time spent on surveying.

This will be **the first attempt in restoring this part of the Great Wall**. The project will be ongoing for the next few months. During this period, [Intel](#) will compile high-resolution images of the site. The conversation team will then use the images to **create a restoration strategy** based on the condition of the structure. The Jiankou section of the Great Wall was built in 1368 during



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the Ming Dynasty era. <http://www.futurecar.com/2243/Intel-to-Deploy-Drones-for-Great-Wall-of-China-Restoration-Project>

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Chinese military working to develop a flying/underwater drone hybrid May 14, 2018 Feilidh Dwyer



China is reportedly looking to gain an advantage over its military adversaries through the development of a ‘transformer’ drone – one which is equally capable of cruising through the skies or gliding beneath the waves.

Long-range UAVs and UUVs (unmanned underwater vehicles) are already in use by Chinese and American forces, however a military drone which is capable of performing at a high-level in both of these realms is still elusive. A team of students and faculty at the PLA Air Force Engineering University are tasked with figuring out a solution to this problem and have received a generous grant from the Chinese government to assist them in their efforts.

Are there other hybrid drone models out there?



[The EagleRay](#)

This drone was developed by researchers at the University of North Carolina. Funding for this UAV derives from US aerospace and defense firm, Teledyne. To date it has completed 12 sky/air missions. <https://www.wetalkuav.com/chinese-military-working-develop-flying-underwater-drone-hybrid/>



DroneUp Completes Executive Team

Chesapeake, VA (May 14, 2018) – Craig Coker, a well-known pilot and drone technology expert, will serve as Chief Pilot and Vice President of Community Development. He is recognized by the industry as one of the top drone operators and has used drone imagery to photograph landscapes, streets, aeriels and world-class events. He was among a group of drone pilots using DroneUp’s mobile app to assist in search and rescue efforts in Texas during Hurricane Harvey.



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Anthony Vittone will serve as Executive Vice President and Chief Operations Officer. Prior to joining DroneUp, he was Senior Vice President of Swimways Corp. in Virginia Beach where he oversaw product development, product integrity, HR, finance, IT and the company's operations in China. He holds undergraduate and law degrees from the University of Richmond and a master's in business administration from the College of William and Mary.

Already this year, DroneUp has launched new initiatives, including [Responsible Community Pilot Program](#) and a [strategic partnership with AirMap](#) to enable drone pilots to request authorization to fly in FAA airspace. Media Contact: Windy Campbell (804) 314-0205

Drone Pilots' \$2,000 Paydays Drop 90% in 'Race to the Bottom' Thomas Black May 14, 2018

Andy Trench made \$2,000 a day in 2015 taking sky-high photographs along the East Coast with a drone he made himself. Now, that same work fetches about **\$175**. "It's apparent that a lot of this industry is a race to the bottom," said Trench, a Rhode Island entrepreneur who's been operating remote-controlled aircraft for more than a decade.



Andy Trench

Prices for collecting airborne data have plummeted amid a flood of competition equipped with cheap, hi-tech aircraft that practically fly themselves.

More companies may fall out if their business model depends on the [Federal Aviation Administration](#) allowing long-distance flights. Drones are currently restricted to flying within sight of their human pilots, and companies that are more limited under current rules are likely to run out of cash before the agency makes any significant change, said Brandon Delet, chief executive officer of Measure.

Drones are enabling industrial companies to slash 25% off the cost of infrastructure inspections, which in the past required humans flying planes and helicopters, or dangling in harnesses beneath bridges. The price charged for a drone inspection of an industrial site has dropped to about \$5,000 -- **a third of what it was two years ago**, said Alex Trepper, who founded GE'S new venture, Avitas Systems.



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Trepper estimates that the “intelligent **inspection**” market for the power, rail, aviation and oil-and-gas industries currently tops **\$27 billion globally**, with the new business of analyzing the collected data **adding another \$20 billion**.

Even with prices dropping, the sheer size of the market is attracting lots of people into the business to offer basic services like roof inspections or aerial photography,” said Phil Finnegan, an industry consultant with the Teal Group. “There are very low barriers to entry.”

Technology itself is proving to be one of the biggest competitive threats. As drones become **more automated** and easier to operate, some would-be customers are deciding to buy their own aerial robots to fly themselves. That’s driving companies such as Avitas to think beyond the aircraft. “**We’re much more interested in the data and data analytics**,” Trepper said.

<https://www.bloomberg.com/news/articles/2018-05-14/drone-pilots-2-000-paydays-drop-90-in-race-to-the-bottom>

San Antonio Utility Goes All in on Drones Betsy Lillian May 14, 2018



San Antonio-based utility CPS Energy is now using drones to perform routine inspections of overhead infrastructure in a safer and more efficient way than conventional methods, the company has announced.

It started testing unmanned aircraft systems to inspect transmission towers and associated high-voltage lines in May 2017. Drone inspections of 50 transmission line towers were completed in **2.5 days**; normally, this work would have taken nearly **two weeks** to complete with conventional methods.

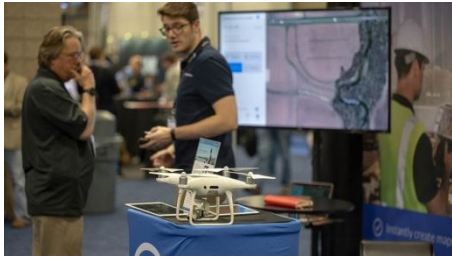
Currently, CPS Energy has two drones in its inventory. The operators must follow Federal Aviation Administration regulations and ensure they are being mindful of customer privacy, the utility notes. https://unmanned-aerial.com/san-antonio-utility-goes-all-in-on-drones?utm_medium=email&utm_source=LNH+05-15-2018&utm_campaign=UAO+Latest+News+Headlines

DroneDeploy expands construction services May 3, 2018 Jim Moore

DroneDeploy has rolled out a new set of features for drone pilots supporting the construction industry.



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DroneDeploy's new [Construction Accuracy Package](#) was created to meet the fastest-growing and leading segment of the company's customer base.

Priced at \$6,999 for an annual subscription with three seats, the new construction package has several features developed by popular demand. One is a simple tool that allows a drone to take a series of photographs over a construction site and repeat that process, capturing new images at precisely the same location, any number of times in the following days, weeks, or months.

The new suite allows for unlimited inclusion of ground control points. The terrain models can verify completion of excavation and site preparation and identify areas of deviation.

A third feature allows companies who do not have their own drone pilots to request aerial services through an on-demand network. Once a request is submitted, a **PDF report** including various data products can be delivered within **48 to 72 hours** to job sites across the continental United States.

While DroneDeploy was once primarily a tool for precision agriculture, **construction has become the No. 1 vertical market for the company**. The segment also is a fast-growing vertical across the entire unmanned aircraft industry. https://www.aopa.org/news-and-media/all-news/2018/may/03/dronedeploy-expands-construction-services?utm_source=drone&utm_medium=email&utm_campaign=180515drone

University of North Dakota to Install Counter-UAS Technology 14 May 2018 Mike Rees



[Dedrone](#) has announced that it has entered into a partnership with the [University of North Dakota](#) unmanned aerial systems education program to install Dedrone's UAS detection technology. The partnership aims to improve safety and security for UND's current UAS flights, and expand opportunities for research and training in the university's Counter UAS and data driven curriculum.

UND will install Dedrone's radio frequency sensors in a mobile counter-UAS truck to detect and track aircraft within designed areas where UAS flights are being conducted. The sensors will detect and track information including the flightpath and location of the pilot. Data collected will be incorporated into the curriculum of over 200 of UND's UAS-related majors and minors



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and be used a foundation for related research. "Students will have first-hand access to Drones technology to understand the intersection of airspace security and technology, and **the importance of risk mitigation for UAS operations**," said Chief UAS Pilot Amanda Brandt. <http://www.unmannedsystemstechnology.com/2018/05/counter-uas-technology-to-be-installed-at-university-of-north-dakota/>

16May18

U.S. agency seeks new authority to disable threatening drones MAY 15, 2018 David Shepardson

WASHINGTON (Reuters) - The head of the U.S. Homeland Security Department on Tuesday told Congress that the agency needs new legal authority to track threatening drones and disable or destroy them if necessary.



Secretary Kirstjen Nielsen told the Senate Homeland Security Committee that DHS needs "clear legal authority to identify, track and mitigate drones that could pose a danger to the public and to DHS operations."

"Our enemies are exploring other technologies, too, such as drones, to put our country in danger. ISIS has used armed drones to strike targets in Syria, and we are increasingly concerned that they will try the same tactic on our soil," she said.

A bipartisan group of senators including committee Chairman Ron Johnson and the committee's top Democrat, Claire McCaskill, said **they had introduced legislation** to give DHS and the Justice Department authority to "to protect buildings and assets when there is an unacceptable security risk to public safety posed by an unmanned aircraft."

The bill would cover high-profile events like the Super Bowl and presidential inaugurations as well as federal installations and the protection of officials. **It would authorize officials** to disrupt communications of threatening drones, seize control or **destroy them** if needed.

<https://www.reuters.com/article/us-usa-security-nielsen/u-s-agency-seeks-new-authority-to-disable-threatening-drones-idUSKCN1IG33G>



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Astral Aviation To Launch Africa's First Cargo Drone Operation Kaleyesus Bekele May 15, 2018

AINonline Kenyan cargo airline Astral Aviation plans to launch **the first cargo drone operation in Africa** by the end of this year. Based in Nairobi and operating cargo flights in Africa, the Middle East, and Europe, Astral Aviation has established Astral Aerial Solutions as a dedicated subsidiary to handle the Kenyan freight specialist's expansion into the niche drone market in Kenya, Rwanda, and Ethiopia. The company also has established a drone technology academy in Kenya that trains youth to operate the vehicles.

Plans call for Astral Aerial Solutions to transport mail and parcels for mining and oil and gas companies and to provide spray services for agriculture. The company plans initially to operate three drones of various sizes and capabilities.

Sanjeev Gadhia, founder and CEO, said the company targets customers both from the public and private sector. "From the public sector we are closely working with the postal service, the Ministry of Transport, and Ministry of Agriculture. From the private sector, we are targeting oil and gas companies, mining companies, and agricultural companies. We also want to transport school books in very remote areas." <https://www.ainonline.com/aviation-news/air-transport/2018-05-15/astral-aviation-launch-africas-first-cargo-drone-operation>

Boffins build smallest drone to fly itself with AI Katyanna Quach 16 May 2018



A team of computer scientists has built the smallest completely autonomous nano-drone that can control itself without the need for a human guidance.

Although computer vision has improved rapidly thanks to machine learning and AI, it remains difficult to deploy algorithms on devices like drones due to memory, bandwidth and power constraints.

But researchers from ETH Zurich, Switzerland and the University of Bologna, Italy have managed to build a hand-sized drone that can fly autonomously and consumes only about 94 milliWatts (0.094 W) of energy. Their efforts were [published](#) in a paper on arXiv earlier this month.



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At the heart of it all is DroNet, a convolutional neural network that processes incoming images from a camera at 20 frames per second. It works out the steering angle, so that it can control the direction of the drone, and the probability of a collision, so that it knows whether to keep going or stop. Training was conducted using thousands of images taken from bicycles and cars driving along different roads and streets.

https://www.theregister.co.uk/2018/05/16/smallest_ai_drone/

Workhorse Horsefly Autonomous Drone Package Delivery Pilot Underway in Cincinnati

May 16, 2018 News



Workhorse Group Inc. today announced that the HorseFly truck-launched Autonomous Drone Package Delivery System is now making real-life package deliveries to homes in the Cincinnati area in a pilot program with the City of Loveland and the FAA. Consumers in select Cincinnati zip codes opted-in to accept packages from Horsefly via the Workhorse Ares Drone Package Delivery App, which is designed to integrate with existing online e-commerce platforms.

The, patented HorseFly system complies with current FAA safety regulations for drone package delivery. Currently, each package is delivered within the delivery driver's line of sight. To date, the system has been tested with UPS and an undisclosed large retailer, and aims to provide cost savings by eliminating extra miles of driving to deliver packages.



The HorseFly UAV Delivery System is integrated with the Workhorse line of electric delivery trucks.

- The truck delivery driver loads the package and launches the HorseFly drone
- The HorseFly drone autonomously launches from the roof of the delivery truck, gains altitude and proceeds to the delivery location, monitoring by a centralized Horsefly control center. The consumer can also monitor the progress of their package delivery through their downloaded app
- At the delivery location, which the consumer can choose on the app by touching the point on a map, the drone autonomously descends and the package is released. The consumer can opt-in to receive a photograph and confirmation of their delivery.
- The HorseFly drone returns to the delivery truck at a planned stop and autonomously redocks and recharges for its next delivery



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http://uasweekly.com/2018/05/16/workhorse-horsefly-autonomous-drone-package-delivery-pilot-underway-in-cincinnati/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_05_16&utm_term=2018-05-16

17May18

FEMA UAS Working Group Established in North Carolina Betsy Lillian May 16, 2018



In partnership with N.C. Emergency Management, the Unmanned Aircraft Systems Program Office of NCDOT's Division of Aviation Office is working with the Federal Emergency Management Agency to create a statewide UAS Working Group with local, state and federal governments, as well as the private sector.

The goal of the UAS Working Group is to establish a partnership through which government and private-sector partners can forge strong relationships by sharing best practices and training for disasters and other emergencies.

The group kicked off its effort last month at a meeting in the Town of Manteo, N.C. Members include representatives from NCDOT, N.C. Emergency Management, FEMA, the Federal Aviation Administration, the Office of the State Fire Marshal, the N.C. Community College System, and the N.C. Public Safety Drone Academy, as well as local law enforcement and fire departments. The **next phase** will involve meetings with **private-sector operators**.

https://unmanned-aerial.com/17461-2?utm_medium=email&utm_source=LNH+05-17-2018&utm_campaign=UAO+Latest+News+Headlines

Interior Department Taps Drone Companies for 'Call When Needed'

Services Betsy Lillian May 16, 2018



As part of a broader strategy to combat wildfires, the U.S. Department of the Interior has **awarded** a "call when needed" contract to four U.S. companies for small unmanned aircraft systems services.

The contract – which is the **first of its kind** for the DOI - will allow the agency to obtain contractor-operated small drones that are ready when needed to support wildland fire operations, search and rescue, emergency management, and other resource missions in the contiguous 48 states and Alaska.



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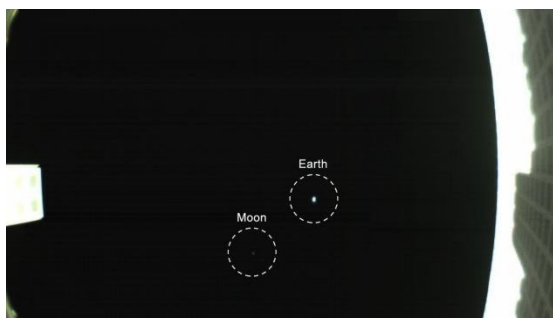
The DOI says the award follows a lengthy process to develop mission performance requirements and select a range of experienced commercial providers to meet this need. Companies receiving awards include Bridger Aerospace of Boseman, Mont.; Insitu of Bingen, Wash.; Pathways2Solutions of Nashville, Tenn.; and Precision Integrated of Newberg, Ore.

The total potential contract value is **\$17 million**. The sUAS selected under the contract will be able to operate during the day or night, without a runway, in sustained winds up to 25 knots, and at altitudes consistent with typical western wildfire environments.

These small unmanned aircraft systems will supplement the manned firefighting fleet by providing the capability to operate during dense smoke/inversion situations which often occur and have heretofore hampered the aggressive prosecution of destructive wildfires. Infrared/thermal camera technology **can penetrate smoke** and disseminate information to incident commanders.

Like their [DOI drone fleet counterparts](#), these aircraft will operate from within the Temporary Flight Restrictions established over most large wildfires. They will also take advantage of the DOI's authority from the Federal Aviation Administration to **operate beyond the visual line of sight** – a critical capability in the smoky wildfire environment. <https://unmanned-aerial.com/interior-department-taps-drone-companies-for-call-when-needed-services>

Tiny, Mars-Bound Satellite Snaps Its First Image of Earth and the Moon Mike Wall, Space.com Senior Writer | May 16, 2018



The Earth and moon star in this first photo from Wall-E, one of NASA's two Mars Cube One **cubesats**, that launched with the agency's InSight Mars lander on May 5, 2018. This view of Earth and the moon was taken May 9.

One of NASA's two Mars Cube One cubesats, which launched toward the Red Planet [along with the agency's InSight lander on May 5](#), took a photo on May 9 to help confirm that its high-gain antenna had deployed properly.

The antenna is in the photo. And so are the moon and Earth, the latter of which appears as a pale blue dot, just as it did in a [famous photo](#) taken by NASA's Voyager 1 probe in 1990. <https://www.space.com/40599-mars-cubesat-earth-moon-photo.html>



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Virginia government seeks drone operators to take pretty pictures, fight crime and survey disaster zones By GRAHAM MOOMAW Richmond Times-Dispatch



William Shuart of the VCU Rice Rivers Center and the Center for Environmental Studies uses aerial imagery and survey-grade GPS units to create 3D models of parts of the Monroe Park campus.

As drones whirl their way further into everyday life, Virginia is moving to **streamline the purchasing process** for state agencies, local governments and universities that want to **use unmanned aerial vehicles** but might not know where to start.

Virginia is taking a leading role in a national [contracting solicitation](#), or request for proposals, meant to **produce a list of vetted drone operators** that public officials can call on for a wide variety of missions, from assisting law enforcement and firefighters to flying over disaster areas after hurricanes, tornadoes and earthquakes.

In its **first-ever drone-related solicitation**, the state’s Department of General Services is inviting bids from interested drone companies through a national procurement program designed to help states team up to find private sector contractors.

Virginia is the lead state on the National Association of State Procurement Officials solicitation, but California, Connecticut, Oklahoma, Montana and Utah have signed on as participants. The deadline for proposals is June 7. Contracts are expected to be awarded by October, with multiple vendors selected to serve different geographic regions.

Almost **50 vendors** participated in a pre-proposal meeting last month. The request asks would-be contractors to estimate their prices for a handful of mission scenarios, but the document does not give a total estimate for how much the state is prepared to spend on drone flights. http://www.richmond.com/news/plus/virginia-government-seeks-drone-operators-to-take-pretty-pictures-fight/article_406c2147-226d-5aa4-b2ee-9ee82f1c8d35.html

Drones in Mining: A Special Kind of Drone for Inaccessible Spaces Miriam

McNabbon: May 16, 2018



Swiss-based company [Flyability](#) makes the Elios – a collision-tolerant drone. It’s a unique solution to the problem of flying in tight spaces: the drone in its

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cage can roll off of the sides of an obstacle while maintaining good video and data. It makes an impossible task – inspecting the inside of a tank, a steel girder, or just a tight space with a drone – possible.

Elios is one of the only solutions that can perform these tasks.

These environments are so hazardous for workers that operations need to be shut down for inspections to be performed. Eric Romersa, CEO of WS Data 3D, says that a one hour inspection could cost a mine \$100,000 to \$150,000 in lost production costs – **a cost eliminated by using a drone**.

With this kind of dramatic benefit, this area of mining is a new and rapidly growing market. While mining managers may need convincing to take on new technology, says Romersa, “When we show them what can be done with professional drones they understand.” <https://dronelife.com/2018/05/16/drones-in-mining-a-special-kind-of-drone-for-inaccessible-spaces/>

Canada’s BVLOS Pilot Program Flies Ahead: With Use Cases You Haven’t Thought of Yet Miriam McNabbon: May 17, 2018



While the U.S. has been busy announcing the 10 selected participants in the drone [Integration Pilot Program \(IPP\)](#), Transport Canada has been developing **a comprehensive pilot program for beyond visual line of sight flight** – one designed to show communities how they may benefit from wide spread adoption of drone technology.

In a partnership between a Swiss drone manufacturer, senseFly, and Canadian commercial drone operations company [IN-FLIGHT Data](#), **22 major organizations will be part of the project to fly for 12 different use cases – involving over 1500 kilometers of BVLOS flight over a 12 week period.**

The project will involve some of the usual missions in BVLOS drone flight – including agricultural and search and rescue applications. But this project also introduces municipal operations missions: things like road traffic studies and graveyard inventories.

The project team will feed data from the missions to Transport Canada to create risk profiles, which will help move regulations forward – and they’ll also be working to communicate their findings to a wider audience.



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Healy says that Transport Canada has said if this program goes well, there will be more of them. More trials and more public interaction, he comments, will **help regulators move forward**. "It's not just about opening up the legislation," says Healy. "It's about building trust with communities." <https://dronelife.com/2018/05/17/canadas-bvlos-pilot-program-flies-ahead/>

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MIT Researchers Develop Virtual-reality Testing Ground For Drones May 17, 2018 News



Training drones to fly fast, around even the simplest obstacles, is a crash-prone exercise that can have engineers repairing or replacing vehicles with frustrating regularity.

Now MIT engineers have developed a new virtual-reality training system for drones that enables a vehicle to "see" a rich, virtual environment while flying in an empty physical space.

The system, which the team has dubbed "Flight Goggles," could significantly reduce the number of crashes that drones experience in actual training sessions. It can also serve as a virtual testbed for any number of environments and conditions in which researchers might want to train fast-flying drones.

"We think **this is a game-changer** in the development of drone technology, for drones that go fast," says Sertac Karaman, associate professor of aeronautics and astronautics at MIT. "If anything, the system can make autonomous vehicles more responsive, faster, and more efficient." Karaman and his colleagues will present details of their virtual training system at the IEEE International Conference on Robotics and Automation next week.

http://uasweekly.com/2018/05/17/mit-researchers-develop-virtual-reality-testing-ground-for-drones/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_05_17&utm_term=2018-05-17

Norwegian Technology Improves Emergency Preparedness In Svalbard May 17, 2018 News



Commercial shipping, tourism and cruise ship traffic to Svalbard and the surrounding marine areas have all grown dramatically in recent years, and this growth is set to continue. Norwegian technology companies want to start using drones to

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improve situational awareness, meet communications needs and prepare to handle incidents.

Large geographic distances and areas without satisfactory coverage for mobile communication, VHF or Maritime Broadband Radio in the area around Svalbard could prove to be challenging in the event of situations such as accidents or natural disasters.

Telenor Svalbard, Andøya Space Center and Robot Aviation are joining forces to develop and test a Norwegian emergency response unmanned aerial system, which will be fitted with telecommunications equipment as well as photo and video cameras, radar and other sensors.

The system is initially intended to be used for emergency response in the event of major accidents or disasters. The team will then assess whether the system is suitable for other purposes, such as inspection work after avalanches, animal counting and temporary communications coverage. http://uasweekly.com/2018/05/17/norwegian-technology-improves-emergency-preparedness-in-svalbard/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_05_17&utm_term=2018-05-18