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10Aug18

DJI responds to drone attacks: “We have limited ability to control what people do with our products” August 9, 2018 Feilidh Dwyer



The world's largest drone manufacturer, DJI, has issued a statement after two of their drones armed with explosives were used in an apparent [assassination attempt against Venezuelan president](#) Nicolás Maduro last week.

The drones in question appeared to be Matrice 600s; commercial-level UAVs intended for aerial photography and costing around \$5000 each. The Venezuelan government claims that each Matrice was packed with a kilo of C4 and were intended to kill Maduro and other important Venezuelan political figures.



DJI [spoke with Dezeen](#) magazine and told them that “DJI makes products purely for peaceful purposes.” As with any technology, if people decide to misuse our products in any way, they have to be responsible for their actions,” they said.

It is, as yet, unclear who exactly was responsible for the attacks. One group calling themselves ‘[Soldiers in T-shirts](#)’ claimed responsibility on Twitter. The Venezuelan government has used the attacks as justification for a further [crackdown on political opponents](#) and have arrested at least 6 people.

Neither drone ultimately made it to their intended targets. According to Venezuela’s Attorney General, this was because they were deflected from reaching their intended course [through protective radio emissions](#) emanating from **Venezuelan intelligence personnel** (similar to [drone killing devices we’ve written about previously](#)). Video footage from multiple angles since the attack suggest that one drone exploded above the soldiers on parade (causing 7 injuries) while the other crashed into the window of an apartment, causing the apartment to catch fire.



A soldier injured by the exploding drone at the Venezuelan National Guard celebration parade in Caracas
<https://www.wetalkuav.com/dji-responds-to-drone-attacks/>



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Laser “license plate” could improve identification of cubesats Jeff Foust August 9, 2018



An Indian PSLV rocket deploys a cluster of cubesats during a February 2017 mission. A new technology could make it easier to identify individual cubesats shortly after deployment.

LOGAN, Utah — A technology using a tiny laser tracker could help resolve one of the major challenges involved with the launching of cubesats: identifying individual satellites after their deployment. The concept, presented at the AIAA/Utah State University Conference on Small Satellites Aug. 9, involves the use of a small, low-power laser on the exterior of a cubesat transmitting a unique identification code that can be observed by small telescopes on the ground.

The solution developed at Los Alamos is called the Extremely Low Resource Optical Identifier (ELROI). A laser transmits brief pulses of light that encodes the identification code, but keeps the system’s average power at the milliwatt level. That signal can be detected on the ground with a 35-centimeter telescope equipped with a narrow spectral filter to block light at all frequencies other than that the laser transmits.

A prototype of the ELROI technology, called ELROI-PC104, will be flown as part of the NMTSat cubesat mission developed by the New Mexico Institute of Mining and Technology. That satellite is scheduled for launch in December on a Rocket Lab Electron rocket as part of a NASA Educational Launch of Nanosatellites mission. <https://spacenews.com/laser-license-plate-could-improve-identification-of-cubesats/>

“No encryption, no fly” rule proposed for smallsats Jeff Foust — August 9, 2018



While most cubesats today don't have thrusters, the growing propulsion options for such small satellites raises new cybersecurity concerns.

LOGAN, Utah — Small satellites that have propulsion systems, but don’t have encrypted command systems, pose a **small** but real threat of being hacked and **endangering other satellites**, according to a new study.

That research by a team of graduate students, presented at the AIAA/Utah State University Conference on Small Satellites here Aug. 9, recommended the space industry take steps to



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prevent the launch of such satellites to avoid an incident that could lead to a “regulatory overreaction” by government agencies.

“We would propose as a policy that, for those cubesats and smallsats that have propulsion, that the industry adopt a ‘no encryption, no fly’ rule,” said Andrew Kurzrok of Yale University.

The concern is a scenario where hackers are able to take control of a satellite and redirect it quickly. Government satellites, as well as many commercial ones, have security measures like encryption that make it unlikely they could be hacked. However, many satellites run by academic institutions don’t have such security, often because of funding or technical limitations.

There’s been no known case where a smallsat with propulsion has been hacked, but Kurzrok suggested it may be only a matter of time. <https://spacenews.com/no-encryption-no-fly-rule-proposed-for-smallsats/>

Homeland Security secretary visits Grand Sky Emily Allen Aug 9, 2018



U.S. Sen. John Hoeven, R-N.D., introduced Department of Homeland Security Secretary Kirstjen Nielsen to local UAS leaders during a Thursday round table at Grand Sky.

Legislation in Congress will heighten North Dakota's role in protecting the U.S. by giving the Department of Homeland Security **more authority** to research and develop **strategies against the misuse of unmanned aircraft**, the head of the national agency said Thursday in North Dakota. Homeland Security Secretary Kirstjen Nielsen and U.S. Sen. John Hoeven, R-N.D., discussed the Preventing Emerging Threats Act of 2018 during her visit to Grand Sky, a UAS business park west of Grand Forks. The bipartisan bill with its own versions in the House and Senate will give the DHS security to counter drone misuse like those Nielsen mentioned.

If DHS could surveil both borders "on a 24-hour-seven-day-a-week basis," Hoeven said, "think how much more effective that would make them in interdicting drugs, smuggling, people coming across illegally." "And so that's what this is about --- developing and using these technologies to really leverage the manpower they have," Hoeven said.

<http://www.grandforksherald.com/news/government-and-politics/4483803-homeland-security-secretary-visits-grand-sky>



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11Aug18

Drone flights may detect Longmont emerald ash borer infestation John Fryar Staff

Writer 08/10/2018



LONGMONT, CO - AUGUST 9: *Dan Staley, of Arbor Drones, catches the drone to avoid any damage in the landing.*

Arbor Drone LLC and Spectrabotics LLC collected data using drone flights over northwest Longmont on August 9 to study and monitor trees affected by Emerald Ash Borer.

It is a non-native, wood-boring beetle that can attach to all ash tree species. This insect was first discovered in Michigan in 2002, and it has spread to 22 states, including Colorado. Once the emerald ash borer population builds in numbers, ash mortality is near 100 percent.

Aurora-based Arbor Drone LLC, a consulting company that specializes in aerial urban forestry and Spectrabotics LLC, a Colorado Springs-based data analytics firm, are collecting data from drone flights over Longmont. They are using a **multispectral sensor** — a high-resolution sensor that collects light in both the visible and infrared spectrums to study plant health. Dan Staley, a principal of Arbor Drone and the pilot in charge of Thursday's project, said one benefit of the overflight is that "**once you find it**, you can define it and follow it."

Arbor Drone and Spectrabotics performed similar emerald ash borer detection and monitoring studies in Denver [and Boulder in 2017](#), and in Denver and in several sites in Boulder County in 2018. http://www.timescall.com/longmont-local-news/ci_32062671/drone-flights-may-detect-longmont-emerald-ash-borer

DroneDek Mailbox Awarded US Patent For Last Mile Drone Delivery August 10, 2018 News



DroneDek is set to disrupt the parcel, package and mail delivery industry by leveraging several patent claims it was awarded. Users will receive alerts when their packages ship or arrive and will be notified of what item has arrived and from whom. A heated and cooled cargo area will pave the way for pharmaceutical, food and beverage delivery. It



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will operate off of solar or a 110v power supply, feature a heated door to operate in any climate and will host a charging station for delivery drones.

Access to its secured cargo area is allowed via encrypted coding. Potential users of the technology include corporate and enterprise users, pharmaceutical industry, food/restaurant industry and internet retailers. http://uasweekly.com/2018/08/10/dronedek-mailbox-awarded-us-patent-for-last-mile-drone-delivery/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_08_10&utm_term=2018-08-11

Kongsberg Geospatial Concludes Trials of Drone Airspace Management System with Transport Canada

August 10, 2018 News



Kongsberg Geospatial Ltd., an Ottawa-based developer of geospatial visualization software, announced today the conclusion of the final trials of **a new situational awareness system for emergency airspace management**, in a project funded by Defence Research and Development Canada.

The trials included drones being operated by the RCMP and the County of Renfrew Paramedics to support several simulated emergency scenarios including a plane crash, a medical emergency, and the protection of a VIP threatened by the approach of a suspicious drone. The trials were conducted with the **drones operating beyond visual line-of-sight** at ranges up to 2 km.

The system integrates real-time data from a variety of sensors, including 3D aerial radar, ground-oriented radar, ADS-B (Automatic Dependent Surveillance – Broadcast) sensors, video feeds, and GPS trackers. By assembling data from all these sources, the EOAMS system allows operators to track and identify a variety of emergency aircraft and cooperating ground vehicles while allowing first responders to safely operate UAVs in the same airspace.

The system can also detect and warn of the intrusion of unidentified, “non-cooperative” UAVs into the airspace. The intrusion of unwanted drones into the skies over disaster scenes is becoming of increasing concern as small consumer camera drones proliferate, since even a small drone colliding with a water bomber or police helicopter could cause a serious accident.



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A light aircraft took part in the exercises in tandem with the drones, and was used to simulate different roles, including that of a water bomber. The trials were conducted like standard emergency training exercises led by an RCMP Incident Commander.

At a few points during the trials, non-exercise aircraft overflew the area and were picked up and displayed. The RCMP and Renfrew Paramedics UAV pilots also flew small consumer-model drones like the DJI Mavic to test the system's capacity to detect very small drones.

"We were very pleased with the outcome of these trials," said Paige Cutland, UAS program director at Kongsberg Geospatial. In debriefs following the exercise, several participants remarked on how easy it was to interpret the information presented in the EOAMS system display and how useful that information was to manage the first responder actions."

http://uasweekly.com/2018/08/10/kongsberg-geospatial-concludes-trials-of-drone-airspace-management-system-with-transport-canada/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_08_10&utm_term=2018-08-11

Controlling drones using mobile voice channels August 8, 2018 Feilidh Dwyer



German researchers in Berlin have successfully trialed using cellular voice networks to remotely control drones.

Networks enable signals to be sent to and from UAVs and their controllers and communicate the drone's location in space. At present, the communication between drones and their pilots is

generally governed via mobile data networks. Researchers from the Fraunhofer Institute for Telecommunications, Heinrich-Hertz-Institute (HHI) in Berlin **discovered** that by using existing mobile voice channels, the connection between drones and controllers were **far more reliable** than the equivalent mobile data channels.

HHI researchers found that because the data required for communicating between a drone and operator were relatively small, converting the digital signal into an audio signal was a straight-forward process. "We convert the commands into audio signals, in much the same way as modems used to. A small module on the drone then translates the audio signal back into a command. Transmitting the information in this way is extremely favorable given that it works in



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real-time and is highly resilient to failures and connection disruptions," Piechotta said.
<https://www.wetalkuav.com/controlling-drones-using-mobile-voice-channels/>

13Aug18

Towns, police use drone technology as their eyes in the sky Nicholas Spangle
rnicholas.spangler@newsday.com August 12, 2018



Smithtown officials used a drone to take video over the old Kings Park Psychiatric Center in June.

Officials are using drone footage to guide firefighters at perilous scenes, monitor municipal property and evaluate storm damage. Most recently, state park police flew drones to **look for sharks** last month after two children were reported bitten in the ocean off Fire Island. "It's become one of our go-to tools very quickly," Smithtown Public Safety Chief John Valentine said.



New York State Park Police Sgt. Jim Harrer is interviewed by NatGeo crews as he operates a drone at Field 5 at Robert Moses on Thursday in Babylon.

Smithtown, one of Long Island's earliest and most aggressive adopters of drone technology, began using drones to conduct damage assessments after superstorm Sandy in 2012 and has since expanded to other planning and public safety applications. Flights in the town are increasingly routine: **Cheaper** than anything a helicopter could provide, **more current** and **customizable** than images from a satellite or airplane.

Nassau County has been flying its two drones for years, producing two- and three-dimensional **maps** for the Department of Public Works. The Suffolk County Police Department uses its drones to aid in **automobile crashes** and other emergencies.

Other towns are catching up with the technology. Southampton Town Police Chief Steven Skrynecki said that within months, his department would field a drone with **infrared** capabilities to **locate fleeing suspects at night** and enough power to carry and **drop a life vest** to distressed swimmers along the town's miles of shoreline. Other anticipated uses include traffic information and **surveillance of barricaded subjects**. Five officers have trained to use it.

John Gonzales, a communications technician for Smithtown and third assistant chief for the St. James Fire Department, flies the department's \$1,500 drone above commercial buildings to do



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fire response preplanning, such as determining ladder positioning. Gonzales said drones also have been used during **water rescues** on the Nissequogue River and Long Island Sound.

Planners hover the drone over **construction sites** about once a week. Hans used the drone earlier this summer to capture a bird's-eye view of a Main Street parking lot due for a major overhaul, **rescaling and overlaying the image** with construction blueprints minutes later at his office with a few mouse clicks.

The cameras that fly have also been used to **settle compliance issues**. Hans proved to managers of a fast-food restaurant in Commack that its outdoor lights were flooding the night sky and needed to be shifted. Armed with photographic evidence, Hans said, he got quick compliance without having to resort to citations. <https://www.newsday.com/long-island/suffolk/drones-smithtown-1.20407781>

Fire crews helping shape future of drone use Teri Figueroa Contact Reporter



SDFD fire engineer Matt Scarpuzzi, a technician with the Bomb-Arson unit, co-controlled a drone that was flying above Fire Station No. 37 during a simulation Friday.

The San Diego Fire-Rescue Department will share their drone experience with others under a pilot program from the federal Department of Transportation to help shape the future of drones in responding to emergencies. The department was one of 10 to join the program which brings together fire departments, private companies and the [Federal Aviation Administration](#).

The idea is to explore what fire crews need, what might be possible with the technology and what regulations need to be in place so fire crews can quickly get FAA permission to launch. Last year, fire officials deployed it over the aftermath of a commercial structure fire to help arson investigators assess where crews needed to start digging to find the fire's origin point. It worked, and investigators were able to quickly focus on the correct area, saving perhaps two days of work.

Two more drones — at a cost of roughly \$160,000 — will be delivered in the next few months, Ring said. San Diego Fire-Rescue has nine FAA certified drone pilots — who are also firefighters and bomb squad members — and will soon add three more.

<http://www.sandiegouniontribune.com/news/public-safety/sd-me-drone-demonstration-20180810-story.html>



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US Army eyes microwave cannon to take out drones Brooke Crothers Fox News



A 1st Security Forces Assistance Brigade (SFAB) Soldier uses a Drone Defender to capture and control a drone as its flying. It uses an electromagnetic pulse to disable its target and has a range of 600 meters.

The Army is planning to purchase a Counter Unmanned Aircraft System from Lockheed Martin with the goal to “field UASs with payloads capable of negating adversary UAS,” the Army said in [its solicitation notice](#). In other words, the Army wants to disable or destroy a drone with an **airborne** microwave beam.

The Counter UAS is based on proprietary intellectual property from Lockheed Martin, who would develop and supply the system. The company has developed laser weapon systems, radio frequency and other directed energy technologies for air, ground and sea, according to its [directed energy web page](#). The focus for these systems is on improving accuracy, mobility, size, weight and power, cooling, and minimal collateral damage.

This comes in the wake of the [alleged drone attack against](#) Venezuelan President Nicolas Maduro earlier this month. The attack seems to have been carried out by drones carrying explosives. The drones allegedly exploded while he spoke at a military ceremony in Caracas. <http://www.foxnews.com/tech/2018/08/10/us-army-eyes-microwave-canon-to-take-out-drones.html>

New Thruster Aims to Help Microsats Bust Out of the Kiddy Pool Debra Werner, Space News August 12, 2018



Stellar Exploration says its miniature bi-propellant thruster will enable planetary microsat missions.

LOGAN, Utah — Stellar Exploration is qualification testing a [miniature propulsion system for planetary microsatellite missions](#).

What's unusual about the technology is its power. The new thruster fueled with hydrazine and nitrogen tetroxide is designed to move a 12-unit **cubesat**, which weighs about 28 kilograms, at a speed of two kilometers per second.



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"The miniaturized bi-prop system allows cubesats to take on the missions normally associated with much larger and more expensive spacecraft," Loucks said by email. "None of the currently marketed propulsion systems for cubesats are even in the same ballpark."

Stellar Exploration developed the new thruster with funding from NASA's Small Innovative Missions for Planetary Exploration program, which supports the formulation and development of small spacecraft science missions. <https://www.space.com/41431-new-space-thruster-for-microsatellites.html>

Drone Delivery Canada Starts BVLOS Test Flights With Remote Communities

Project August 13, 2018 News



Drone Delivery Canada is pleased to announce that Transport Canada has granted the Company approvals to commence Beyond Visual Line of Sight (BVLOS) test flights in Alma, Quebec.

The test flights are the first phase of DDC's Remote Communities Project. Testing in Alma commenced August 13th and is anticipated to run until August 17, 2018. This testing program is a key part of our preparatory efforts for DDC's direct participation in the Transport Canada, BVLOS Pilot Project. Upon completion of the Alma flights, DDC looks to commence testing in the communities of Moosonee and Moose Factory during a two (2) week period in September 2018.

"The Sparrow cargo drone is now fully equipped and operational for testing as we move to commercialization," added Paul Di Benedetto, CTO. "I would like to thank our entire team who spent extensive time and effort developing our proprietary FLYTE platform alongside our key Government stakeholders. Our FLYTE Management System enables our fleet of delivery drones to **integrate safely into existing airspaces** making commercial drone deliveries a reality both in Canada and abroad." http://uasweekly.com/2018/08/13/drone-delivery-canada-starts-bvlos-test-flights-with-remote-communities-project/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_08_13&utm_term=2018-08-13

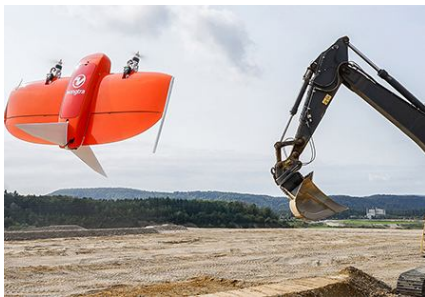


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New distribution deal for Wingtra sees drone company capitalize on Canadian market

BUSINESS NEWS EMMA CALDER AUGUST 13, 2018

Wingtra, a Swiss drone company, has signed a re-seller agreement with GlobalTroxler, a leading construction equipment and surveying distributor based in Canada. Justus Bamert, head of sales for the US and Canada at Wingtra, said: "We believe that partnering with GlobalTroxler will have a great impact on our presence in the Canadian market with their trusted reputation for selling the best quality surveying and construction equipment."



WingtraOne takes-off and lands as a multicopter but flies in the air as a fixed wing aircraft. This technology eliminates the risk of damaging the aircraft while landing, lets the drone carry professional sensors and still allows mapping of large areas. The PPK (post process kinematics) upgrade allows the aircraft to reach new level of **accuracy down to 1 cm without any ground control points**.

Don Wilgosh, president at GlobalTroxler, commented: "We are excited to offer our customers a fixed wing option with VTOL capabilities. The WingtraOne is a technologically advanced, high precision, PPK enabled product that will position our company, and our customers, at the leading edge of the geomatics industry in Canada."

http://www.commercialdroneprofessional.com/new-distribution-deal-for-wingtra-sees-drone-company-capitalise-on-canadian-market/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-271592-Commercial+Drone+Professional+DNA++2018-08-13

14Aug18

Kansas gearing up for first flight in federal drone program

Daniel McCoy – Reporter, Wichita Business Journal Aug 13, 2018



The [Kansas Department of Transportation](#) on Tuesday will begin the state's first unmanned aircraft systems flights as part of its participation in a new federal program aimed at further incorporating drones into the national airspace.

KDOT says that it will conduct its inaugural flight of the program — the state's first to go **beyond visual line of sight** — near Salina at an event that will include officials from the Federal Aviation Administration and members of



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Kansas' congressional delegation. It will kick off the state's participation in the U.S. Department of Transportation's UAS Integration Pilot Program. KDOT was named in May to the group of 10 participants in that program nationwide.

With a state team that includes more than **30 industry partners**, the Kansas portion of the program over the next two years will focus on the use of drones over farms, roads, transmission lines and other infrastructure.

Kansas State University Polytechnic in Salina will fly the inaugural operation. The school in June received **the first waiver** for a university from the FAA for drone operations that go beyond the line of sight. <https://www.bizjournals.com/wichita/news/2018/08/13/kansas-gearing-up-for-first-flight-in-federal.html>

North Dakota Site Set to Fly Large Drone Without Chase Plane Aug. 13, 2018

AP The Federal Aviation Administration in 2016 allowed the Northern Plains Test Site in **Grand Forks** to begin flying the drones **beyond visual line of sight**. The facility has now been approved to fly without the chase planes.

The first flight is scheduled Tuesday at the Grand Sky aviation technology park. It will be conducted by General Atomics Aeronautical Systems Inc. The FAA contract allows the drones to fly within 30 miles of the park.

Officials say **Air Force Secretary Heather Wilson** is scheduled to attend an Aug. 20 event to commemorate the FAA authorization. <https://www.usnews.com/news/best-states/north-dakota/articles/2018-08-13/north-dakota-site-set-to-fly-large-drone-without-chase-plane>

San Diego Fire Department calls in camera-equipped drones for rescue missions

BUSINESS NEWS EMMA CALDER AUGUST 14, 2018



Cape, a multinational provider of cloud platforms for drone telepresence and data management, confirms a partnership with the City of San Diego with the launch of the city's first **UAS Integration Pilot Program** drone deployment for the San Diego Fire Department.

The launch, which is one of the first IPP deployments



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nationwide, was kicked off with a live public safety demonstration at San Diego Fire Station last week. Working alongside the San Diego Fire Department, drones equipped with the Cape Aerial Telepresence platform were launched as part of a fire call simulation.

The demonstration showcased a number of drone capabilities that will be utilized in San Diego's public safety IPP initiatives, including the ability to provide real-time aerial visibility to first responder teams both on scene and in the command center and to better and more quickly inform resource decisions for emergency situations.

Announced in late 2017, the IPP is an initiative from the U.S. Department of Transportation and Federal Aviation Administration, focused on enabling the safe expansion of commercial drone operations in the United States. Cape is one of the first companies to be awarded waivers under both Section 333 and Part 107 regulations, and has performed more than 100,000 flights in the US, Middle East, Mexico, and New Zealand, with zero incidents.

http://www.commercialdroneprofessional.com/cape-takes-to-the-skies-in-san-diego-with-local-fire-department/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-271726-Commercial+Drone+Professional+DNA++2018-08-14

15Aug18

Governor: Aerospace firm to create 350 jobs in Oklahoma Tim Talley, Associated Press
August 14, 2018



Oklahoma Gov. Mary Fallin said Tuesday, Aug. 14, 2018, that Nevada-based Valkyrie Systems Aerospace has formed a partnership with the state to operate manufacturing facilities as well as flight operations and training in the Oklahoma City area.

OKLAHOMA CITY (AP) — An aerospace manufacturer that produces unmanned aircraft plans to locate its operations center in Oklahoma City and create more than 350 jobs over the next five years, Gov. Mary Fallin said Tuesday.

Nevada-based Valkyrie Systems Aerospace has formed a partnership with the state to operate manufacturing facilities as well as flight operations and training in the Oklahoma City area, Fallin said. Valkyrie's HoverJets are unmanned and optionally piloted aircraft that support such missions as medical evacuations, extraction of personnel and equipment, threat detection and firefighting. The HoverJets' unique heavy-lift vertical takeoff and landing abilities allow them to operate in any environment.



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Valkyrie officials said the chance to integrate the company with the University of Oklahoma's aviation and aerospace engineering program and Oklahoma State University's autonomous unmanned aerial vehicles program was one of the reasons it partnered with the state.

<https://www.chron.com/news/education/article/Governor-Aerospace-firm-to-create-350-jobs-in-13155098.php>

Need a Quick Inspection of a 58-Story Tower? Send a Drone Nick Madigan Aug. 14, 2018



John Murphy and Larry Shueneman of Coastal Construction fly a drone over a construction site at the Miami Worldcenter, in Miami. Credit Saul Martinez for The New York Times

With their low cost and ease of handling, drones are saving money and time on big construction projects. They could also save lives.

As the head of a 700-year-old winemaking dynasty, Lamberto Frescobaldi is overseeing a construction project in one of his Tuscany vineyards using technology that would have seemed **otherworldly** to his ancestors: high-flying drones.

By launching a drone over the Perano vineyard in the Chianti region south of Florence, Mr. Frescobaldi can examine the progress of a 25,000-square-foot garden being built atop one of his wine cellars. The rooftop garden is intended for wine tastings, a crucial marketing strategy for the vintner's business. The company, which has a half-dozen vineyards that produce 11 million bottles of wine each year, reported revenue of \$120 million in 2017.



A drone image of the early stages of construction of a garden in the Perano vineyard in the Chianti region south of Florence, Italy.

Richard Shelbourne, a British landscape architect who designed the garden, said the drone images helped refine the project.

"The garden design, which started in my head and was then calculated and set out on paper, could now be seen in full scale from the air, and all the lines and curves were in the right place," he said.



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The drone allowed the men to observe the work of excavators and motorized barrows, and the construction of pergolas, fountains and terra-cotta walkways. After looking at the drone footage during construction, they decided to modify an entrance to the garden.

Small, swift and agile, drones have all but replaced the more costly and less nimble helicopter for tasks that involve inspections, measurements and marketing images.

<https://www.nytimes.com/2018/08/14/business/drones-real-estate-construction.html>

Striking drone photo series places class divide under the spotlight [Nick Lavars](#)



Mumbai, Mexico City, Baltimore [VIEW GALLERY - 55 IMAGES](#)

Drone photography has quickly come to offer us entirely new perspectives on the world we live in, and for photographer Johnny Miller, the reality of that world isn't all rainbows, waterfalls and [gorgeous cityscapes](#). The South African-based freelancer has been using these flying robots to **document inequality around the world**, resulting in a stunning and confronting set of images that highlight the stark contrast between the haves and the have-nots.

"For example, there are huge buffer zones that were created to keep different racial groups separate," Miller tells New Atlas via email. "I just thought that was fascinating. So when I got the drone in February 2016, I had a spark of inspiration that perhaps I could capture those separations from a new perspective." <https://newatlas.com/unequal-scenes-drone-photography/55899/#gallery>

"To paraphrase Barack Obama, inequality is the defining challenge of this generation," Miller says. "It's not confined to one region of the world. It's not confined to one group of people, or one nation – it is intersectional, it is international. What I'm trying to do with this project is provide a visual language to discuss inequality. To help bring the topic into the public consciousness." To see more of Miller's drone photography, be sure to have a look through [our gallery](#). <https://newatlas.com/unequal-scenes-drone-photography/55899/>



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16Aug18

Turkey, Indonesia support UAV collaboration Jon Grevatt, Bangkok - IHS Jane's Defence Industry 15 August 2018



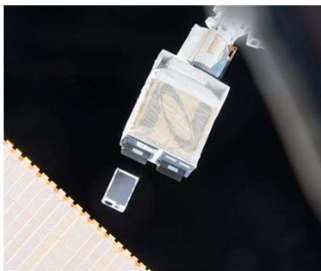
Turkish Aircraft Industries (TAI) has expanded its engagement with Indonesian aerospace and defence companies in a bid to support collaboration on programmes including a medium-altitude long-endurance (MALE) unmanned aerial vehicle (UAV) project.

TAI said in a statement that it held a workshop in Jakarta on 14 August with local aerospace and defence companies "regarding possible co-operation on several upcoming bilateral opportunities such as a UAV tender for the Indonesian Ministry of Defence".

TAI confirmed that in bidding for the UAV programme, it is offering its MALE Anka UAV. TAI added that it is "ready to fine-tune" the Anka system "to satisfy the requirements of the Indonesian end-user through integrating ... Indonesian suppliers into its supply chain".

However, TAI also said that collaboration opportunities will not be limited to the Anka. "It will be a sustainable, long-term, win-win relationship," it said, "in which all parties will find opportunities to advance their business goals in local and global markets in the medium [term]." <https://www.janes.com/article/82381/turkey-indonesia-support-uav-collaboration>

ASTERIA Wins Small Satellite Mission of the Year Award Staff Writers Pasadena CA (JPL) Aug 15, 2018



The ASTERIA mission has earned the Small Satellite Mission of the Year award from the Small Satellite Technical Committee of the American Institute of Aeronautics and Astronautics (AIAA). The award is given to a mission that has "demonstrated a significant improvement in the capability of small satellites."

The mission is a collaboration between NASA's Jet Propulsion Laboratory, Pasadena, California, and the Massachusetts Institute of Technology. The award was presented at this month's annual Small Satellite Conference in Logan, Utah, hosted by AIAA and Utah State University.



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ASTERIA stands for Arcsecond Space Telescope Enabling Research in Astrophysics. For its primary mission, ASTERIA was designed to test miniaturized technology for precisely measuring the brightness of stars, which includes the ability to stabilize the spacecraft so that it can point itself directly at a star for an extended period of time.

While this technology has been readily demonstrated in larger satellites, **shrinking it down to fit** inside a small satellite **was an engineering challenge**. In the future, this technology could be used in satellites to assist in searching for transiting exoplanets.

http://www.spacedaily.com/reports/ASTERIA_Wins_Small_Satellite_Mission_of_the_Year_Award_999.html

National Guard using Reaper drone to fight wildfires ELIZABETH MCLAUGHLIN Aug 15, 2018



As wildfires rage across the state, about 1,000 [California](#) National Guard soldiers are supporting response efforts, providing unique military capabilities to contain the fires.



An MQ-9 Reaper remotely piloted aircraft takes off from March Air Reserve Base, California, Aug. 1, 2018, to provide visualization and mapping data to firefighters battling deadly fires in Northern California.

Massive wildfires currently cover about 760,000 acres of California -- the size of the state of Rhode Island or 60 times the size of the island of Manhattan. Guardsmen are using 22 aircraft to help civil authorities fight the fires, including the MQ-9 Reaper, a remotely piloted drone that **can fly up to 24 hours each day**.

The Reaper maps the behavior of a fire in real time, recording thermal imagery that can be analyzed and shared with California Fire chiefs. While it can't fly during certain wind conditions, the Reaper isn't hindered by heavy smoke that can affect piloted aircraft. The drone's infrared capability allows it to **"see through" smoke** that could otherwise hinder visual sight. <https://abcnews.go.com/US/national-guard-reaper-drone-fight-wildfires/story?id=57199785>



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Truth is Stranger than Fiction: This Drone Uses the Super Powers of Spider

Silk Miriam McNabbon: August 10, 2018



Spidey Tek – a biotech company partnered with Utah State University – is “dedicated to the mass production of the strongest material known to man, Real Spider Silk, and its utilization to produce superior products for the 21st Century,” says the company website. “Spider silk is a Bio-material stronger and lighter than steel, aluminum, carbon fiber, Kevlar or any other material available to man.”

It’s the culmination of years of work from an amazing team of scientists, led by Roberto Velozzi, chairman and CEO, who has always had a passion for things that move fast, he says – cars, aircraft, or drones – so he decided to design the Spidey Bat drone to demonstrate the properties and characteristics of manufactured spider silk.



Lightweight and strong are important characteristics of drone construction – weight has a direct influence on endurance and speed. At [about 10x the tensile strength](#) of carbon fiber and a **fraction of the cost**, the advantages of the spider silk are clear.

Built of spider silk and resin, the Spidey Bat is a vertical take-off and landing vehicle. The wings rotate forward as the drone reaches altitude, allowing it to fly like an airplane. The drone has **a flight endurance of an hour** on a regular LiPO battery. Most significantly, says Velozzi, the drone is nearly **indestructible**. It’s an aircraft with the aesthetics to star in a Marvel movie, but the capabilities to be utilized in a wide range of commercial or military applications.

<https://dronelife.com/2018/08/10/truth-is-stranger-than-fiction-this-drone-uses-the-super-powers-of-spider-silk/>



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Drone Summit and Flight Expo Illustrates How North Carolina is set to Become Next in Flight

Jeremiah Karpowicz August 16, 2018



At the inaugural [North Carolina Drone Summit and Flight Expo](#), Lt. Governor Dan Forest [mentioned that](#) just as North Carolina was first in flight with manned aircraft, it can be next in flight with unmanned aircraft. It's a concept that a variety of drone stakeholders and organizations have been working toward across the state for years now, with companies like PrecisionHawk and senseFly establishing headquarters there. That's in addition to the commitment made by the North Carolina Department of Transportation to utilize UAV technology to help manage 80,000 road miles and 13,500 bridges.

With so much activity around drones in North Carolina, the **Division of Aviation** wanted a way to bring the various **companies, government operators and public safety agencies that use and develop the technology together under one roof**, and the Drone Summit and Flight Expo was able to do just that. Representatives from the FAA, NCDOT, Intel and NASA used the event to showcase insights and updates that will help the state as a whole achieve that next in flight status, and also compel further adoption across the rest of the country.

https://www.expouav.com/news/latest/drone-summit-and-flight-expo-north-carolina/?utm_source=marketo&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter&mkt_tok=eyJpIjoiWW1aallUTmlaV0k0TkdNdylsInQiOiJwTlJ5RGZHeMd1ZTBYeFp4Z21xelBUNW5Ne nZaM1BsVVRTSEN2ZmVhZm1kcWlsMEpuKzJsM3poczB6eTF3Z1RyQXArR3M1Tnk1M1VLT2c5aEJcLzZ6MzhsRjQ5MVNCSmVkMIYrZ2RLSIFVa0RLaURKdU1BT0I5NkOrb3R2M0pqaG8ifQ%3D%3D

Unmanned cargo aircraft for military supplies

August 16, 2018 [By John Keller](#) Editor



WARREN, Mich. – U.S. Army military logistics experts are reaching out to industry to find companies able to prototype an [unmanned](#) aerial vehicle (UAV) [cargo aircraft](#) able to transport as much as **600 pounds**

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of [military supplies](#) like ammunition, water, and food to forward-deployed warfighters engaged on the battlefield.

Officials of the Army Contracting Command in Warren, Mich., announced plans Wednesday to issue a request for prototype proposals (UASRPP18-10) for a medium-size UAV able to move supplies quickly to and from the battlefield.

Army experts want a UAV **prototype** able to carry a payload of between 50 and 600 pounds of supplies while maintaining a **gross take off vehicle weight of less than 1320 pounds**. The prototype could be roughly similar to an Airbus VSR700 rotary-wing UAV.

[Related: Aurora moves forward with project to develop unmanned helicopter for battlefield resupply](#)

The Airbus VSR700 helicopter UAV has a maximum takeoff weight of 1,543 pounds, and empty weight of 882 pounds, and can carry as much as 661 pounds of fuel and cargo. It can fly as fast as 100 knots, as high as 13,123 feet, and has a maximum range of 435 miles.

The Army will issue a formal request for proposals to the National Advanced Mobility Consortium (NAMC) in Ann Arbor, Mich. Information on the NAMC and/or how to become a member is online at www.defensemobility.org. More information is online at <https://www.fbo.gov/notices/48bbbed1127df86e533c6ca7a85a27b21>, or the National Advanced Mobility Consortium at www.namconsortium.org.

<https://www.militaryaerospace.com/articles/2018/08/unmanned-cargo-aircraft-military-supplies.html>



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