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NASA to Host Industry Day for UAS Integration in Natl Airspace [Scott](#)

[Nicholas](#) on: November 03, 2017, [Industry News](#)



NASA plans to host an industry day on Nov. 30 in San Diego, California, to convene and collect input from commercial and academic organizations that support ongoing projects to integrate unmanned aircraft systems into the national airspace system.

The space agency [said Thursday](#) it aims to **demonstrate the systems integration** and operationalization of UAS in the national airspace **by the summer of 2020**.

The event will feature discussions about NASA's research on detect and avoid, command and control and other UAS vehicle technologies in line for Federal Aviation Administration certifications for flights at an altitude of **more than 500 feet**.

NASA will also communicate its expectations throughout the partnership development process as well as procure rough orders of magnitude cost from the industry to support acquisition decisions. <http://blog.executivebiz.com/2017/11/nasa-to-host-industry-day-for-uas-integration-in-natl-airspace/>

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US DOT reveals drone safety program that could pave the way for business use of UAVs Olivia Krauth | November 3, 2017

The US Department of Transportation is working on regulatory measures to allow the safe operation of drones, US Secretary of Transportation Elaine Chao [announced Thursday](#).

The new, three-year Drone Integration Pilot Program **will pair public entities with partners in the drone industry to create ideas on how to safely integrate drones into US airspace**, according to the announcement.

An FAA [federal register notice](#) explained the timeframe for interested parties to apply.

Approved applicants will be able to deploy drones within 180 days. The DOT will select a minimum of five partnerships, according to a DOT press release.



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"These partnerships will allow local communities to experiment with new technologies like package delivery, emergency drone inspections, and more, on terms that work for them and in ways that support a unified and safe airspace," Chao told hundreds of drone operators and industry leaders at the announcement.

The DOT cited [research](#) by Association of Unmanned Vehicle Systems International, saying drone usage can mean up to 100,000 new jobs. Other industries with the potential for immediate impact include photography, agriculture, and emergency management, according to the release. <https://www.techrepublic.com/article/us-dot-reveals-drone-safety-program-that-could-pave-the-way-for-business-use-of-uavs/>

Drones are reportedly spying on women in Australia Courtney Thompson November 3, 2017

A growing number of women in Port Lincoln, South Australia, have reported being woken at night by a drone spying on them in their homes. One woman was sleeping alone on her remote hobby farm when she was woken up by an object banging into her window, only to realize it was a drone with a camera attached.

Another woman told the ABC of the **anxiety and panic** she now experiences at night due to a similar encounter, saying, "You'll hear a noise and even if it's not a drone you just get paranoid." Despite the fact there are laws in place which mandate drones must not fly within 100 feet of buildings or people, police do not know the offender.

These disturbing instances reflect the growing problem of the law being ill-equipped to deal with fast-developing technology, such as drones and revenge porn — with women constituting the largest proportion of victims to cyber-crimes. http://nypost.com/2017/11/03/drones-are-reportedly-spying-on-women-in-australia/?utm_campaign=partnerfeed&utm_medium=syndicated&utm_source=flipboard

Forests lost in wildfires could be replanted by drones Walt Bonner | Fox News



"The current state-of-the-art is hand-planting saplings," former NASA engineer and BioCarbon CEO Lauren Fletcher said. "The goal of our technology is to make the current planters more effective at what they do."

According to Fletcher, his drones **can plant trees 60 times faster** than hand-planting. First, a group of drones perform a 3D aerial survey of the land for topography and soil quality data.

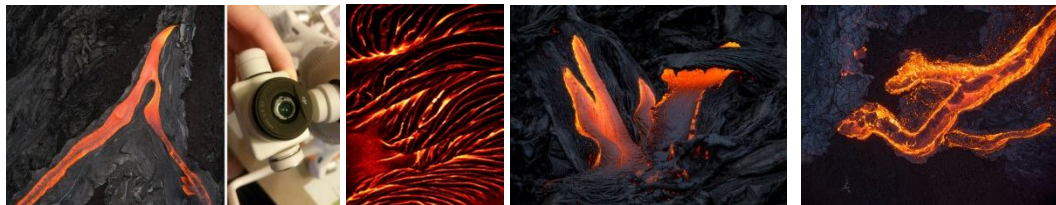


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After a seeding pattern is planned, the drones are loaded with seed pods. These pods are pressurized canisters that burst upon impact and are filled with germinated seeds soaked in a nutrient-rich gel. The drones then set out over the mapped terrain, hovering up to 6 feet and firing their pods (about ten per minute) into the ground. The seedlings are then monitored for growth.

"We have designed our system so that two pilots will run multiple drones simultaneously, allowing for a daily planting rate of 100,000 trees per day," Fletcher told Fox News. "Just 60 teams will allow us to plant 1 billion trees a year, with the potential to scale to 10's of billions of trees every year." <http://www.foxnews.com/tech/2017/11/03/forests-lost-in-wildfires-could-be-replanted-by-drones.html>

PHOTOGRAPHER MELTED HIS DRONE TO CAPTURE LAVA FLOWS. IT WAS WORTH IT November 4, 2017 by [Dunja Djudjic](#)



Photographing volcanoes can be dangerous, but it's certainly an experience to remember. Israel-based photographer [Erez Marom](#) traveled to Hawaii to try it for himself, and he captured the **magnificent view of hot lava flows**. But there was a price to pay – and he paid with his gear.

He used a drone to get some aerial shots. But at one point, he got too close and the hot lava melted the plastic. Fortunately, Erez still managed to save the photos, and he kindly shared them with DIYP. And although his drone is destroyed – it was definitely worth it.

<https://www.diyphotography.net/photographer-melted-drone-capture-lava-flows-worth/>

Miners Aim 'Very Sci-fi' Drones at Dark, Dangerous Places Mike Cherney Nov. 5, 2017

JUNDEE, Australia—Hundreds of feet underground here, scientists are experimenting with a technology that could transform how mining companies dig out rocks in dangerous, pitch-black caves: fully autonomous drones. The drones would fly **without any pilot assistance** into areas too risky for human miners. Using a rotating laser similar to those on autonomous cars, they would create three-dimensional maps.



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In September, a team of researchers from Data61, part of the Australian government-funded Commonwealth Scientific and Industrial Research Organisation, demonstrated at Jundee that a drone could fly by itself in an underground cavern where the pilot couldn't see it. But that means the pilot also couldn't intervene if something went wrong.

"It's a pretty big step for us and it shows that this is feasible," said Stefan Hrabar, the Brisbane, Australia-based scientist who led the team.

More work still needs to be done. Right now, researchers first must fly the drone with assistance from a pilot to build a preliminary map. Using the initial data, they can then program the drone to fly autonomously to certain locations. But the ultimate goal is a fully autonomous drone that can simply be taken underground and turned on, and then fly away to map a tunnel or cavern. Such drones could be tested in the next few months.

<https://www.wsj.com/articles/miners-aim-very-sci-fidrones-at-dark-dangerous-places-1509886805?mod=flipboard>

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NASA Creates Industry Day to Talk Drone/NAS Integration with Academia, Industry

S.L. Fuller | November 3, 2017



NASA is further [calling on the industry](#) to help with unmanned aircraft system (UAS) integration into the U.S. national airspace system (NAS). The agency is hosting an industry day at the end of the month to galvanize interested parties in preparation of a 2020 demonstration under its "UAS in the NAS" project.

Scheduled for **Nov. 30 in San Diego**, Industry Day would call for input from commercial and academic partners who are interested in supporting or who have technology available that can support the planned systems integration and operationalization (SIO) demonstration to take place in mid-2020.

According to NASA, the goals of Industry Day would include leveraging agency research in integrated detect and avoid, command and control, and other technologies. This would assist in the effort toward FAA certification of operations above 500 feet or more agl.



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<http://www.aviationtoday.com/2017/11/03/nasa-creates-industry-day-talk-dronenas-integration-academia-industry/>

New Mexico governor excited about federal drone program *The Associated Press*
NOVEMBER 03, 2017 ALBUQUERQUE, N.M.

Gov. Susana Martinez says aviation and innovation have been crucial to New Mexico's economy over the years and the integration of drones into the wider airspace will make for even more opportunities.

The two-term Republican governor joined federal officials and industry representatives in Washington, D.C., on Thursday to kick off the Trump administration's drone project. The plan calls for select states, communities and tribes to **devise their own trial programs** in partnership with government and industry users. The results will help in crafting new regulations.

Martinez said drones offer nearly limitless potential for rural states like New Mexico but that integrating the technology into everyday life must be done safely.

<http://www.miamiherald.com/news/business/article182471256.html>

Drones become crime-fighting tool, but perfection is elusive John

Seewer | AP November 3



Officer Scott Hermon prepares to pilot the department's first drone in Streetsboro, Ohio. Streetsboro Police became one of hundreds of agencies across the country adopting drone technology when Hermon became the first Streetsboro officer certified to fly drones in October. Streetsboro Police say they can't afford a helicopter, but a drone provides many of the same capabilities at a fraction of the price.

TOLEDO, Ohio — The armed robbery suspect hiding out in a camper in rural Michigan heard state troopers closing in, so he dashed into a field and crouched among the 6-foot-tall cornstalks. What he didn't know was that police had eyes on him from above.

Drones are fast becoming an essential tool for more law enforcement agencies, changing how officers carry out everyday tasks and bringing air surveillance to departments with limited budgets. The remote-controlled flying machines have been deployed to bust up a ring stealing bulldozers and backhoes from construction sites on the East Coast; to patrol beaches for sharks; and to scan neighborhoods for survivors in hurricane zones.



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But there are obstacles to overcome before drones can change policing. The limitations aren't just with their small size and battery life; federal regulations restrict how far they can go; and police face questions about how they plan to use the surveillance technology.

The number of police, sheriff, fire and emergency agencies with drones doubled in 2016, with nearly 350 departments having them as of last year, according to a study released this past spring by the Center for the Study of the Drone at Bard College in New York. Almost half were in places with fewer than 50,000 people. https://www.washingtonpost.com/national/drones-become-crime-fighting-tool-but-perfection-is-elusive/2017/11/03/21b86ff6-c057-11e7-9294-705f80164f6e_story.html?utm_term=.8c3c63f433c1

Police drones offering new crime fighting tools for investigators Stephanie Parkinson



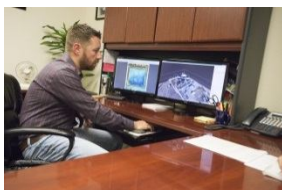
On August, 30 2016, Lisa Samson-Moore was hit and killed while jogging on Dehmel Road in Frankenmuth. Police say her body was left on the side of the road and the driver took off. Now, her sister Tina Samson credits the police drone used in her case for finding the man who was behind the wheel.

Michigan State Police Trooper Mike Darrow flew the police drone over the area where Lisa was killed just one day after she died. He was able to map out the entire scene. The Frankenmuth Police chief says this method freed up his officers. Chief Don Mawer says the drone **cuts down on the processing of a scene by 50-60 percent.**

Mawer also says it helps his officers build better cases. When officers process a scene from the ground they measure and take photos from the ground. The drone allows Darrow to take aerial photos which he can compile together to create a scaled map. One thing that the drone can do, that even a helicopter can not, is fly at the exact height of where the driver's eyes would have been. "Now we're going into almost a virtual accident reconstruction, where through software we can almost recreate what the driver should have seen or would have seen," said Mawer. <http://nbc25news.com/news/local/police-drones-offering-new-crime-fighting-tool-for-investigators>

East Texas company's drones help survey hurricane damage November 5, 2017

JOSH EDWARDS The Associated Press



NACOGDOCHES, Texas (AP) — Unmanned aircraft helped a Nacogdoches business survey hurricane damage with a degree of speed and safety once thought impossible.

Robert Rea | Axcel Innovation | Charlottesville and Portsmouth, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com



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The Daily Sentinel reports after Hurricane Harvey battered the Texas coast and Hurricane Irma swamped Florida, Hydrex Environmental set to the air with drones not much bigger than a model airplane to map damage. Before drone technology, surveys of large flooded sites would have taken weeks. Crews would not have been able to begin until floodwaters receded significantly.

Collier pointed to a landfill survey in Florida after Irma where a half million dollar tarp was destroyed. The giant tarp was meant to keep water from leeching through garbage in the landfill but it was no match for Irma.

“Getting boots on the ground that would have taken two or three weeks at least, instead you get a **48-hour turn around**,” Collier said. No one had to step foot in the flooded area to get a quick survey. <https://www.seattletimes.com/business/east-texas-companys-drones-help-survey-hurricane-damage/>

Spanish project to launch drone-based PV maintenance system 11/06/2017 Tildy Bayar

A Spanish research project is aiming to optimize [solar](#) PV plant performance through the use of drones.



The €650,000 project, called SCARAB, is a collaboration between power and control electronics outfit Ingeteam and the University of Castilla La Mancha. According to Ingeteam, the project aims to develop more efficient sensors to monitor and process the signals received during inspection as well as automatic PV panel fault detection. It also aims to develop advanced fault classification algorithms that can estimate a PV plant’s status and optimize maintenance strategies.

The drone will feature in-built sensors; algorithms to detect and classify potential causes of reduced panel performance such as damage, soiling or deterioration; other algorithms to provide indicators of the technical and economic performance of the system, and an application to optimize maintenance activities.

Ingeteam said drone inspections will lead to improved panel inspection and shorter measurement-taking and post-processing times, while minimizing operation and maintenance costs and maximizing the service life of the plant.

<http://www.powerengineeringint.com/articles/2017/11/spanish-project-to-launch-drone-based-pv-maintenance-system.html>



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ISS Resupply Mission Supports Small Satellite Experiments *Nov 6, 2017* Mark

Carreau | *Aerospace Daily & Defense Report*



HOUSTON—Orbital ATK's eighth resupply mission to the International Space Station (ISS) will carry a number of forward-looking scientific research and technology demonstrations to be staged aboard microsattellites.

The ISS, home to an estimated 250 science investigations currently underway or planned for this year, will host a diverse list of investigations staged aboard **CubeSats** that will either be deployed from the orbiting science lab after Orbital's Cygnus cargo capsule docks, or from the freighter itself once Cygnus departs the station after its planned month-long stay.

EcAMSat, a 14.4-in.-long, 23-lb. CubeSat developed by the Stanford University School of Medicine and [NASA's Ames Research Center](#) to help establish the 6U small satellite format, will be among the cargo transfers. EcAMSat will move to the station's Japanese Kibo science module in a NanoRacks CubeSat Deployer for a planned late November launch.

Four days after deployment, an automated 150-hr. investigation will begin into the effects of a vibration- and jolt-free weightless environment on multiple samples of natural and mutant forms of E. coli growth. The growth will be logged, along with the responses of the samples to low, medium and high concentrations of the antibiotic Gentamicin—all carried out autonomously aboard the CubeSat in a complex fluidic environment at temperatures akin to those found in the human body. http://aviationweek.com/space/iss-resupply-mission-supports-small-satellite-experiments?NL=AW-05&Issue=AW-05_20171107_AW-05_11&sfvc4enews=42&cl=article_4&utm_rid=CPEN1000003332045&utm_campaign=12459&utm_medium=email&elq2=c537c0d7ea7e4285be22ed5898cfd051

Nebraska Air Force base expands protection against drones *Associated*

Press November 6

OFFUTT AIR FORCE BASE, Neb. — Officials say an Air Force base south of Omaha has expanded its defenses against drones and can stop any that venture within its boundaries of airspace. A news release from the Offutt Air Force Base says it now has “a number of unique defense systems” to protect against drones.



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Drones are entirely off-limits within 3 miles (5 kilometers) of the base's airfield. Drone use between 3 miles and the edge of its Federal Aviation Administration airspace at 5 miles (8 kilometers) is very limited.

The message follows recent guidance from the Pentagon that lays out the military's authority to **disable or shoot down any drone** that violates airspace restrictions over a U.S. base. Navy Capt. Jeff Davis said a classified policy covering drones had been approved in August.

"The increase of commercial and private drones in the U.S. has raised our concerns with regards to safety and security of our installations," he said.

https://www.washingtonpost.com/national/nebraska-air-force-base-expands-protection-against-drones/2017/11/06/65d73be6-c30d-11e7-9922-4151f5ca6168_story.html?utm_term=.7652c0f19215

How the FAA plans to speed drone integration Mark Rockwell, Nov 06, 2017

Just days after the White House [gave](#) the Federal Aviation Administration three months to launch a UAS Integration Pilot Program to speed up the integration of drones into the national airspace, the agency said the program is ready to go.

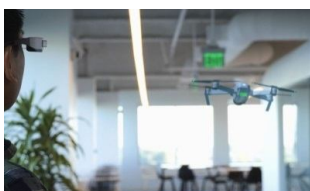


The Nov. 2 plan called for the FAA to match state, local and tribal governments with commercial UAS operators or manufacturers. Those **teams** can then apply to the FAA to **set up local test zones** and feed their airspace integration data to the agency.

The program is designed to "to solve technical, regulatory, and policy challenges, while enabling advanced UAS operations in select areas subject to ongoing safety oversight and cooperation between the Federal government and applicable State, local, or tribal jurisdictions," according to a [Federal Register notice](#) scheduled for publication on Nov. 8. Operators will have latitude to experiment with operational and communications concepts to advance the integration of drones into the existing aviation environment. <https://gcn.com/articles/2017/11/06/uas-integration-pilot-program.aspx>

Epson Launches DJI Drone Flight Simulator App for Smart Glasses 06 Nov 2017 |

Caroline Rees



[Epson](#) has announced the launch of what it claims is **the world's first glasses-based augmented reality (AR) drone flight simulator** app,



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developed by Y Media Labs exclusively for the Epson Moverio BT-300 (FPV/Drone Edition) smart glasses.

The application allows a user to fly a 3D digital drone in the real world using flight controllers from the latest DJI drones. The simulator mirrors the natural, real-world movements of a DJI Mavic Pro, allowing new pilots to learn to fly and experienced pilots to sharpen their skills. The flight simulator experience is viewed through the Epson Moverio BT-300 smart glasses and includes a fly mode and two mini-games for advanced pilots.

http://www.unmannedsystemstechnology.com/2017/11/epson-launches-dji-drone-flight-simulator-app-smart-glasses/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=67fc61cbd1-eBrief_2017_7_Nov_11_3_2017&utm_medium=email&utm_term=0_6fc3c01e8d-67fc61cbd1-119747501

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Researchers set new UAS delivery record for medical supplies

Researchers from Johns Hopkins University School of Medicine recently transported human blood samples across 161 miles of Arizona desert using a Latitude Engineering HQ-40 UAS, in the process setting **a new delivery distance record for medical UAS**. During the **three-hour** flight, which took off and landed at the same airfield on a UAS test range, the drone's onboard payload system maintained temperature control, which helped make sure that the samples were usable for laboratory analysis after landing. "We expect that in many cases, drone transport will be the quickest, safest and most efficient option to deliver some biological samples to a laboratory from rural or urban settings," says Timothy Amukele, assistant professor of pathology at the Johns Hopkins University School of Medicine.

https://magappzine.s3.amazonaws.com/auvsi/issues/00042/auvsi_00042.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIJA75PD6L5CZCXJQ%2F20171108%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20171108T195039Z&X-Amz-Expires=3600&X-Amz-SignedHeaders=host&X-Amz-Signature=1675327846b1fc81dc1227c39784a3391ee73f758b310a29c067cc8cbdc6b495

Power Play by Nick Adde

Unmanned aircraft are enabling power companies to examine their facilities more quickly and inexpensively than ever before, with less potential threat to crews, their customers, and equipment. Ameren, the utility provider for large parts of Missouri and Illinois, relied upon drone inspections to assess damage caused by storms this past spring.

"Ameren is **deploying UAS technology in all areas of our business**," says James Pierce, program lead for the company's innovation group. With quad-rotor and fixed-wing unmanned aircraft,



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Ameren technician-pilots are supplementing inspection of high-voltage transmission lines and structures, inspecting the integrity of assets, and looking for evidence of vegetation encroachment on energy delivery systems. They also are mapping gas facilities across both states the company serves, and providing detailed looks at high-space and indoor sites.

The company began using drones in earnest roughly two years ago, with full implementation emerging in March. "There have been some direct cost savings, but we've really seen results in the time and safety aspects for much of what we've tested. We're able to keep coworkers out of harm's way and see a quicker turnaround in obtaining results from our inspections," Pierce says. Further expansion of UAS use hinges upon the regulatory evolution still taking place in the aftermath of July's change in the law. While Pierce hails the FAA's efforts to craft effective policy in what he calls a "Wild-West environment that comes with commercializing UAS," he says **the approval process is still far too slow**.

https://magappzine.s3.amazonaws.com/auvsi/issues/00042/auvsi_00042.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIJA75PD6L5CZCXJQ%2F20171108%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20171108T195039Z&X-Amz-Expires=3600&X-Amz-SignedHeaders=host&X-Amz-Signature=1675327846b1fc81dc1227c39784a3391ee73f758b310a29c067cc8cbdc6b495

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Uber Partners With NASA in Vision for Managing Flying Cars Natalie Wong and Edward Ludlow November 8, 2017



[Uber Technologies Inc.](#) advanced its vision of a network of flying cars by signing **an agreement with NASA on how to safely manage the futuristic systems**. The ride-sharing startup has said it plans to roll out an on-demand vertical take-off and landing (VTOL) [network](#) in Dallas and Dubai by 2020, and Wednesday added Los Angeles to the list. But many regulatory hurdles will need to be cleared before that can happen, including approval by the Federal Aviation Administration, which will have to figure out how flying cars can get along with airplanes, helicopters and drones in the sky.

On Tuesday, Uber took a step toward resolving that by signing an agreement with the National Aeronautics and Space Administration to develop new traffic concepts that will enable safe and efficient operations of robotic flight systems, the company said.

Uber said it's also working with aircraft, infrastructure and real estate partners to operate fixed routes between city hubs called "Skyports." The San Francisco-based company's vision for the network, dubbed "uberAir," would let customers push a button and get high-speed flight in and



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around cities, the company said at a web summit in Lisbon.

<https://www.bloomberg.com/news/articles/2017-11-08/uber-partners-with-nasa-in-vision-for-managing-flying-cars>

Here's How Drones Do (and Don't) Threaten Passenger Aircraft Jeremy

Hsu November 8, 2017



One warm evening this fall a pair of U.S. Army UH-60M Blackhawk helicopters cruised low over New York City's Staten Island, providing security for the United Nations General Assembly's annual meeting in nearby Manhattan. Just after sunset a shoe box-size airborne object collided with one of the choppers, damaging its main rotor blade, window frame and transmission system. Inspection at a nearby airfield revealed evidence of something that had never happened before—a civilian drone had plowed into a crewed craft in U.S. airspace. That sent the Army, the [National Transportation Safety Board](#) and other government agencies scrambling to investigate how and why this had happened.

Those questions, although important, are less interesting to aviation researchers than determining **just how much damage increasingly common drones**—like the [1.4-kilogram quadcopter](#) in the Staten Island incident—**can potentially inflict** on helicopters and small, low-flying aircraft. Data on the risk that lightweight drones pose to aviation safety is scarce, even as consumer and commercial drone sales take off.

Pilots already take the potential for drone collisions very seriously, sometimes putting potentially lifesaving missions on hold for fear of such a strike. In August firefighters battling a large blaze on Montana's Rice Ridge temporarily shut down helicopter operations when an unauthorized drone was spotted in the sky nearby. The following month government agencies issued terse warnings for civilians to keep their drones far away from low-flying aircraft being used to locate and evacuate Hurricane Harvey victims in Houston. It remains unclear, however, **whether the risk of a drone collision is big enough** to outweigh the need for those aircraft to carry out their missions. <https://www.scientificamerican.com/article/here-rsquo-s-how-drones-do-and-don-rsquo-t-threaten-passenger-aircraft/?sf153691575=1>

Drone used to find missing woman in North Carolina cornfield Fox News

An 81-year-old woman who was lost in a North Carolina cornfield on Sunday was **found in less than 30 minutes** after officials used a drone to locate her, a video released by police showed.



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Mary Brown was walking near her home when she got lost about 11:30 a.m. on Sunday, [WFMY](#) reported. Randolph County police launched a drone to locate her after the “difficult terrain and a cornfield” slowed the search down. “The Drone pilot, Officer Adam Krolfifer was able to locate the missing person within 25 minutes,” Sheriff Robert A. Graves wrote in a Facebook post.

The department has used the drone in the last two months to also film two homicide scenes and catch a suspect trying to avoid a drug arrest, according to WFMY.

<http://www.foxnews.com/tech/2017/11/08/drone-used-to-find-missing-woman-in-north-carolina-cornfield-video-shows.html>

Intel Continues to Use Drone Light Shows to Wow – and Educate -the Public

Miriam McNabbon: November 03, 2017



Local TV stations in Folsom, CA [reported](#) that residents were treated to a free show overhead – a spectacular light performance using [Intel's](#) “Shooting Star” drones.

Intel was reportedly testing the show and invited employees and families to watch. The show utilized **500 drones**, which launched into the sky and performed a choreographed routine.

The show, described by onlookers as “breathtaking,” and “the coolest thing ever,” has been featured at the SuperBowl, Wonder Woman launch, and will be seen at the 2018 Winter Olympics.



The Intel Shooting Star drones are a new type of unmanned aerial vehicle (UAV), specifically designed for entertainment purposes such as festivals and entertainment events. They are tiny – almost cute – and completely non-threatening. The blades are entirely enclosed in a wire cage. They are lightweight and safety is inherent in their design.

But while these tiny drones are used purely for entertainment, they are a powerful way of testing new drone technology that could allow fleets of drones powered from a central point to perform commercial operations. The light shows have allowed Intel's engineers to address questions of redundancy, safety, and precision. Drone light shows are an excellent way of reaching a large number of people, in a non-controversial way, and showing them a small part



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of what drones can do. <https://dronelife.com/2017/11/03/intel-continues-use-drone-light-shows-wow-educate-public/>

DJI Unveils FlightHub Software for Enterprise Drone Management Malek

Murisonon: November 07, 2017

In a significant move for the drone industry, hardware giant DJI has made the move into **operations management software**. FlightHub is a fully-integrated, web-based management solution that helps businesses oversee live operations. Its focus is the secure management of real-time drone operations, flight data, drone fleets and pilot teams.

"As commercial use of drone technology increases each day, businesses need a solution that lets them scale their operations quickly and efficiently manage their growing fleets and teams across multiple locations," said Jan Gasparic, DJI's Head of Enterprise Partnerships.

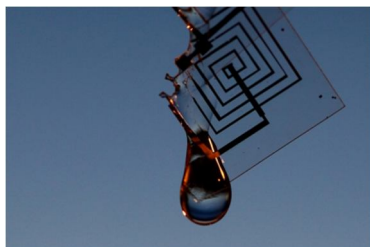
"FlightHub is the first solution of its kind that empowers businesses to manage their drone operations in one place, securely, within seconds and from remote locations."

<https://dronelife.com/2017/11/07/dji-flighthub-software-enterprise/>

MIT-founded Morse Develops Single-Use Disappearing Drone for DARPA MARCO

MARGARITOFF NOVEMBER 8, 2017

The Pentagon's Defense Advanced Research Projects Agency [challenged researchers in 2015](#) to develop **aerial "disappearing delivery vehicles."** The goal was to create drones that would be deployed from an aircraft, deliver their payloads, and literally disappear. [According to Popular Mechanics](#), DARPA granted the MIT-founded Morse Corp. its requested \$8 million in funding to develop the Icarus drone in 2016. If you're wondering whether that's just a perfect name for a drone that eventually dissolves because of the sun or if it's an acronym, well, both. It's the [Inbound, Controlled, Air-Releasable, Unrecoverable Systems project](#). its objective was to create a disappearing drone that could fly 100 miles, land within 30 feet of its target, and dissolve within four hours or within 30 minutes of the sun rising.



"Developing an aircraft that can meet the accuracy and range requirement alone is a challenge," [said Kellas](#). "But add in the disappearing requirement and the problem becomes nearly impossible. One year later Icarus has reached "advanced research stage," bringing the once seemingly impossible task closer to reality.



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DARPA was keen on producing such UAVs to deliver important payloads such as anti-venom or plasma, as well as tools to people in remote areas or dangerous territories where detection of drones could further the threat of reprisals. These UAVs need to be extremely lightweight, which was accomplished by using a film that has structural integrity but doesn't weigh the drone down. [According to MIT](#), the guidance system required to make this thing autonomous is embedded within the film and is smaller than a tennis ball. The polymers that comprise the rest of the drone are highly sensitive to sunlight and heat, causing them to dissolve into liquid after a short amount of exposure time. Ultimately, only the guidance system and the payload itself remain.

Let's take a closer look at what an Icarus looks like upon disintegration.



The remaining guidance system of an Icarus drone, with the dissolved polymers surrounding it.

This is all highly impressive on an engineering and physics-based analysis. The idea that something could initially seem virtually impossible, but become reality a few years later due to the right kind of funding and support, is an incredible testament to human ability. Hindsight is 20/20, while the foresight required to develop this is usually left to cutting-edge research teams like these. <http://www.thedrive.com/aerial/15867/mit-founded-morse-develops-single-use-disappearing-drone-for-darpa>

KSU to host drone workshop Bob Christy, Kent State University Nov 8, 2017

Kent State University's College of Aeronautics and Engineering will host four workshops on drones. The first event will take place on Nov. 13, with a reception starting at 6 p.m. and conference from 7 to 9 p.m. at the Kent Student Center Kiva.

This workshop is presented for the general public **and intended to educate and inform communities on the technology**. Kent State's College of Aeronautics and Engineering is tentatively planning three additional seminars in January, February and April.

For more information on the November conference, please visit www.kent.edu/cae/event/drones-suav-unmanned-aeronautical-vehicles-tools-toys-or-aircraft. Registration for the event is required. Please visit www.eventbrite.com/e/dronessuav-lecture-series-tickets-38516290261.



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Drone organization to start flying on the Space Coast Wayne T. Price, FLORIDA TODAY Nov. 9, 2017



A new organization focusing on drones, automation and other technologies is starting in Brevard County. The The Association of Unmanned Vehicles Systems International Space Coast Chapter will hold its first meeting Wednesday at Groundswell Startups. The Space Coast Satellite Chapter, a subsidiary of AUVSI's Florida Peninsula Chapter, will focus on **building awareness and dialogue among the region's defense, civil, commercial, academic, and government sectors**. The satellite chapter will also support a new Brevard County School Board Science, Technology, Engineering and Math initiative to bring AUVSI Foundation SeaPerch kits to area middle and high schools.

Uses for drone technology seem endless in Brevard. They're already being used to monitor the Indian River Lagoon and the coast for environmental purposes, not to mention inspecting crops and structural damage to buildings.



AUVSI unanimously selected Melbourne unmanned systems entrepreneur Todd A. Hillhouse to lead the new Space Coast satellite chapter. <http://www.floridatoday.com/story/money/2017/11/09/drone-organization-start-flying-space-coast/847430001/>

Bundle up and watch a Wallops rocket launch tomorrow morning Jason Samenow November 10



A rocket will blast away from Wallops Island, Va., **early tomorrow morning** and will be visible over much of the Mid-Atlantic. For best viewing in the D.C. area, find a location with an unimpeded view of the southeast sky, where you should direct your eyes. The rocket's vapor trail should become visible about 90 seconds after launch. At its highest, the rocket will zip about 10 degrees above the horizon.



Beyond Washington, the launch should be visible between North Carolina and Connecticut.



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The Antares rocket “will carry Orbital ATK’s Cygnus spacecraft with more than 7,000 pounds of food, clothing and experiments on the CRS-8 mission to the International Space Station,” [NASA says](https://www.washingtonpost.com/news/capital-weather-gang/wp/2017/11/09/you-can-watch-a-rocket-launch-saturday-morning-from-d-c-but-bundle-up/?utm_term=.4bd7a01e3f98). https://www.washingtonpost.com/news/capital-weather-gang/wp/2017/11/09/you-can-watch-a-rocket-launch-saturday-morning-from-d-c-but-bundle-up/?utm_term=.4bd7a01e3f98

Ready to book your satellite launch online? The rocket industry looks to run more like an airline. Christian Davenport November 9

The Phantom Express, as it is known, would perform like one of the many jets in Boeing’s vast fleet, landing on a runway with a 737-like wingspan, able to take off quickly on demand — just fuel up and go. But instead of carrying passengers, it would launch satellites into orbit. And if all goes to plan, soon it would be able to fly to the stratosphere or beyond 10 times in 10 days under a test program funded by the Defense Advanced Research Projects Agency (DARPA).

The market for these new launches is being driven by a revolution in satellite technology that is dramatically reducing their size. To meet the potential demand, there are **more than 40 small launch vehicles in development around the world**, said Phil Smith, a space analyst at Bryce Space and Technology, a consulting firm.

One company that spotted the early potential for frequent flight is SpaceX, the rocket maker founded by tech billionaire Elon Musk. SpaceX has launched 16 times this year, more than many space-going nations, and Musk has said SpaceX’s goal is to launch more and faster in the coming years.



Rocket Lab’s Electron rocket at the company’s launch site in New Zealand. (Photo courtesy of Rocket Lab)

It’s a goal shared by several other firms, and one that has captured the attention of the White House.

https://www.washingtonpost.com/news/innovations/wp/2017/11/09/ready-to-book-your-satellite-launch-online-the-rocket-industry-looks-to-run-more-like-an-airline/?utm_term=.adef12f7e3f6

Congress Poised to Restore Drone Registration Tossed by Court Alan Levin and Daniel Flatley November 9, 2017

FAA’s registry of drone owners was vacated by court in May. The government’s registration system for owners of civilian drones would be restored in a defense policy bill agreed to by House and Senate negotiators. The measure boosting aviation regulators’ ability to regulate the burgeoning world of small unmanned vehicles was contained in the National Defense



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Authorization Act for 2018, a bipartisan compromise that is likely to be passed by both chambers.

The registration was imposed at the close of 2015 as the number of safety incidents involving drones soared and officials sought a way to ensure owners of the devices understood aviation regulations. However, many operators objected to what they saw as an intrusion into their right to fly and seized on language in a 2012 law that said drone hobbyists were exempt from regulation by the U.S. Federal Aviation Administration.

The U.S. Court of Appeals in Washington overturned the FAA drone registration system in May, finding that earlier legislation passed in 2012 didn't give the agency legal authority for it. A one-paragraph addition to the defense bill said that the registration system "shall be restored" as soon as the legislation becomes law.

The FAA had registered 838,620 people as owners of at least one drone and estimates that 2.3 million of the devices will be sold for recreational use in the U.S. this year.

<https://www.bloomberg.com/news/articles/2017-11-09/congress-poised-to-restore-drone-registration-tossed-by-court>