



## UAS and SmallSat Weekly News

23-28 July 2017

### CONTENTS

- 2 MIT Researchers Develop Mini-Computer Chips for Mini-Drones
- 2 Are Flying Vineyard Drones Creating Better Wine?
- 3 Anti-drone radio wave startup SkySafe secures \$11.5M from Andreessen
- 4 CNN Receives First-Ever Part 107 Waiver for Closed Set Drone Operations
- 5 Field widens for commercial drone use beyond photography
- 5 Privately-owned drones will require licensing under new Government scheme
- 6 MMC Launches One-Stop Rental Solution For Industrial UAS In India and Asia
- 7 Drones can help, hinder Colorado wildfire fight
- 8 Caller-Times drone team takes storytelling to the sky
- 9 Drone racing lifts off, delivering 'out of body' experiences
- 9 NASA Grant Funds Research Into Tracking UAVs
- 10 How North Dakota Is Using Drones to Diversify Its Economy
- 11 China's Ehang to Launch Commercial Fly-by-iPad
- 12 Ocean-spanning terror drones that can fly for thousands of miles without a break could attack the US from Africa with deadly explosives
- 13 Alta Devices Joins High Altitude Technology Group
- 13 Airbus Jet-Propelled UAV Demonstrator Completes First Test Flight
- 14 New Long-Distance Drone Detection Solution Revealed
- 14 50 AIRPORTS TO PROVIDE AUTOMATED AIRSPACE AUTHORIZATION FOR UAS STARTING THIS FALL
- 15 EAA Embraces Drones, New Technologies
- 16 MADISON POLICE USE 2 NEW DRONES TO INVESTIGATE CRIMES
- 16 Reports Of DJI Spark UAVs Falling Out Of Sky Raise Safety Concerns
- 16 Flirtey Continues to Lead Drone Delivery Industry
- 17 The DRL Premiers Allianz World Championship Race 2017 Season Finale On ESPN
- 18 Know Before You Fly Reaches Major Milestone with More than 500,000 Unique Visitors to Website
- 18 3 Drone Companies to Invest in Today
- 19 Russian scientists put a defibrillator on a drone
- 20 Spot Nearby UAVs With DeTect's DroneWatcher App
- 20 UK government's drone collision report criticized



## UAS and SmallSat Weekly News

### MIT Researchers Develop Mini-Computer Chips for Mini-Drones

Researchers at MIT are designing smaller, more efficient computer chips to "miniaturize the brain of a drone." [MARCO MARGARITOFF](#) JULY 20, 2017



CHRISTINE DANILOFF / MIT SHARE

Researchers at MIT are developing miniature chips, which would require far less power, ridding drones of the hitherto-required battery weight. Smaller chips, less batteries, less weight.

[MIT researchers Sertac Karaman and Vivienne Sze claim](#) that this is a wholly "new approach" to minimizing the restrictive need for large batteries and weight. "Imagine buying a bottlecap-sized drone that can integrate with your phone, and you can take it out and fit it in your palm," Karaman says. "If you lift your hand up a little, it would sense that, and start to fly around and film you. Then you open your hand again and it would land on your palm, and you could upload that video to your phone and share it with others," [says Karaman](#).

The research being done at MIT is partly funded by both the National Science Foundation and the Air Force, with their goal, [according to Karaman](#), being to design the "smallest intelligent drone that can fly on its own." Currently, their most successful prototype can process images at 20 frames per second, accurately orient the UAV, and consume less than 2 watts of power. That's a huge leap from the current quadcopter standard of using between 10 and 30 watts of power, never mind their batteries being too heavy to fit on one of these proposed mini-drones. <http://www.thedrive.com/aerial/12671/mit-researchers-develop-mini-computer-chips-for-mini-drones>

### Are Flying Vineyard Drones Creating Better Wine?

*Vintners are using aerial drones to improve vines, bottom lines and what ends up in the bottle. But will the art and instinct of winemaking be impacted?*

BY MATT ALDERTON

Drones prove useful as wine increasingly embraces sophisticated science, which adds a 21st-century sheen to an age-old craft.



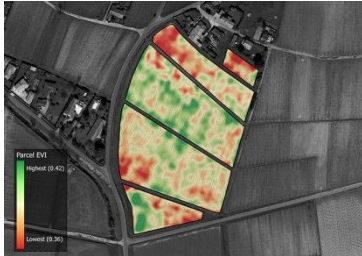
## UAS and SmallSat Weekly News

“Plants that have a high level of photosynthetic activity are healthier than plants that have a low level of photosynthetic activity,” says Kevin Gould, founder and CEO of [Hawk Aerial](#), which pilots drones for vineyards.

“The drones take photos using multispectral cameras. They then stitch those images together and then the composite image is processed by a proprietary Enhanced Vegetation Index computer algorithm. This colorizes the image which makes vine vigor visible.”

“That alerts the vineyard manager and viticulturist to various levels of health or low health in their vineyard,” says Gould, who likens “vigor maps” to compasses. Although they don’t tell growers the reasons why vines are weak—be it poor irrigation, inadequate fertilization or pests—they point them in the right direction.

“Wine that’s made from diseased grapes has an off-flavor, so disease-free grapes offer wine drinkers a better drinking experience,” says Melissa Staid Ph.D., co-founder and CFO of [VineView](#), who says plant vigor also impacts taste. “There’s an optimum vigor level associated with quality wine, so the extent to which a grower is proactive about managing vigor will result in a much better quality wine.”



*A drone’s map of vineyard EVI levels (Enhanced Vegetation Index), also known as vigor / Photo courtesy SkySquirrel*

<http://www.winemag.com/2017/07/20/are-flying-vineyard-drones-creating-better-wine/>

## Anti-drone radio wave startup SkySafe secures \$11.5M from Andreessen

[Josh Constine \(@joshconstine\)](#)



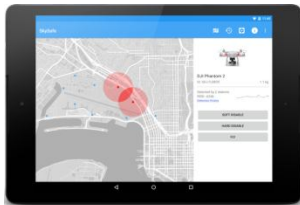
Drones are a threat to both military and public safety, whether flown by a terrorist or just a



## UAS and SmallSat Weekly News

reckless pilot. SkySafe's radio wave technology can detect and stop rogue drones from entering unauthorized areas like military bases, stadiums, prisons and airports. SkySafe's radio frequency signals are projected from a perimeter of nodes or even a Jeep, and force unapproved drones to leave or land while allowing permitted drones to fly.

Now just two years after launch, [SkySafe](#) has [raised](#) an \$11.5 million Series A round led by Andreessen Horowitz, whose partner Lars Dalgaard will join the board. It [adds](#) to the [\\$3 million seed](#) led by Andreessen last year.



Meanwhile, SkySafe has secured a \$1.5 million Department of Defense contract with Naval Special Warfare to provide counter-drone tech to the Navy Seals. SkySafe's mobile defense vehicle can accompany armed forces in the field to protect a moving perimeter from drone attacks or surveillance. <https://techcrunch.com/2017/07/20/skysafe/>

**23July17**

## CNN Receives First-Ever Part 107 Waiver for Closed Set Drone Operations

CNN Aerial Imagery and Reporting (CNN AIR) is pleased to announce that CNN has become the first organization to be granted a Part 107 waiver by the Federal Aviation Administration (FAA) **to fly small unmanned aircraft systems (UAS) over people for closed-set motion picture and television filming**. CNN previously received the first-ever waiver granted by the FAA **to fly UAS over members of the public for media coverage, including newsgathering and reporting activities**.

CNN's successful waiver application builds on its longstanding commitment to moving UAS policies forward for news organizations. In 2015, CNN was selected by the FAA as one of the first three industry "Pathfinders" to develop safe uses of UAS in newsgathering, particularly in urban populated areas. This approval builds on CNN's closed set filming authority previously granted under Section 333 of the FAA Modernization and Reform Act of 2012. [http://uasweekly.com/2017/07/21/cnn-receives-first-ever-part-107-waiver-closed-set-drone-operations/?utm\\_medium=push\\_notification&utm\\_source=rss&utm\\_campaign=rss\\_pushcrew](http://uasweekly.com/2017/07/21/cnn-receives-first-ever-part-107-waiver-closed-set-drone-operations/?utm_medium=push_notification&utm_source=rss&utm_campaign=rss_pushcrew)



## UAS and SmallSat Weekly News

23July17

### Field widens for commercial drone use beyond photography [Ashley Lisenby St. Louis Post-Dispatch](#) Jul 21, 2017



Madison County Sheriff Deputy Darren Onwiler demonstrates the drones camera capabilities on June 29.

Evolved from their model plane and military origins, today's unmanned aircraft are being put to work by businesses and public agencies in the St. Louis region.

Brian Borton, operations manager with Gateway Drone Resources, said the drones his company uses capture images that, coupled with advanced software, can help clients in agriculture, utilities and construction understand their land and projects better.

**Commercial drone spending is projected to exceed \$20 billion in roughly five years.** Drone companies such as Borton's, which hired two people in July to boost its payroll to about a dozen, are also growing, adding revenue and jobs to the local economy.

As more drones take to the skies, more local governments [are passing laws](#) with restrictions on them, often citing privacy concerns. Borton said a recently passed drone ordinance in Chesterfield hasn't hurt his business but presents a challenge.

[http://www.stltoday.com/business/local/field-widens-for-commercial-drone-use-beyond-photography/article\\_97463d8e-4dca-52c9-9d44-53ff364a90bf.html](http://www.stltoday.com/business/local/field-widens-for-commercial-drone-use-beyond-photography/article_97463d8e-4dca-52c9-9d44-53ff364a90bf.html)

### Privately-owned drones will require licencing under new Government scheme [Rachel Roberts, Agencies](#)



Picture: Getty Images/iStockphoto

A [drone](#) registration system is to be launched in a bid to reduce the increasing problem of their misuse, the Government has announced.

Twenty-two incidents involving drones, balloons or unknown flying objects were



## UAS and SmallSat Weekly News

investigated by the **UK Airprox Board** from January to April this year. Figures obtained by the Press Association show forces recorded 3,456 episodes last year, almost triple the 2015 figure of 1,237 and more than 12 times the 2014 tally of 283.

The proposed measure will help authorities trace owners when the unmanned gadgets are used inappropriately - with their increased use to fly drugs and other contraband into prison a growing concern. <http://www.independent.co.uk/news/uk/home-news/drones-private-owned-registration-government-security-scheme-home-office-terrorism-prisons-a7854011.html>

**24July17**



[July 24, 2017](#)

### **MMC Launches One-Stop Rental Solution For Industrial UAS In India and Asia.**

Leading commercial drone manufacturer MMC has introduced their One-Stop Rental Solution for industrial drones in India and Asia. **The company plans to expand the program across the globe, opening centers in the United States**, Australia, Canada, Europe, South America, and South Africa.

MMC leads the market in applications for drone technology, such as mapping, inspections, power-line stringing, and surveillance. But while the return on investment for industrial uses is high, customers may hesitate to make an initial investment in a commercial drone before seeing what they can do.

The decision isn't only based on cost. MMC's Lu Ling, VP and Managing Director of the Overseas Market, says that MMC recognizes the need to take on more of the burden of drone operation for their customers: drone maintenance, educating the end user, and setting up data analysis solutions. [http://uasweekly.com/2017/07/24/mmc-launches-one-stop-rental-solution-industrial-uas-india-asia/?utm\\_medium=push\\_notification&utm\\_source=rss&utm\\_campaign=rss\\_pushcrew](http://uasweekly.com/2017/07/24/mmc-launches-one-stop-rental-solution-industrial-uas-india-asia/?utm_medium=push_notification&utm_source=rss&utm_campaign=rss_pushcrew)

**Drones can help, hinder Colorado wildfire fight** *Drones can provide situational awareness to make sure a fire is doing what it is expected to do* [ALEX ZORN](#) | The Rifle Citizen Telegram July 21, 2017



## UAS and SmallSat Weekly News

While some states are already using Unmanned Aircraft Systems (UAS), Center of Excellence UAS integration specialist Garrett Seddon said it will take some time before drones begin to be used in live wildfires.

"I envision **fire departments taking UAS out on calls with them in the next couple of years,**" he explained. "It's hard to put a timetable on it because it is an always emerging technology. We know its capabilities and potential. It will take case studies to prove that it can do what it is supposed to do."



Military and UAS Integration Specialist for the Center of Excellence Garrett Seddon stands with drone that he hopes one day may be used in wildfires.

One way Seddon envisions using drones is during lightning storms. He said drones may be used to survey the area for smoke and pinpoint where exactly lightning hits. Drones also can provide situational awareness to make sure fire is doing what it is expected to do, though Seddon said there are no use cases yet.

Large UAS, drones more than 55 pounds, have been used to deliver cargo for the military, which Seddon believes has practical applications for fire suppression. He envisions several units being used to fly and drop water around the perimeter of the fire, though that also has not had real-world application to date. <http://www.denverpost.com/2017/07/21/drones-colorado-wildfire-fight/>

## Caller-Times drone team takes storytelling to the sky

[Tim Archuleta](#), Corpus Christi Caller-Times July 21, 2017

We are excited to announce that the Caller-Times is adding drone coverage to our storytelling toolbox.

The network established a partnership with a Federal Aviation Administration test site, **Virginia Tech University, to provide a pilot training program.** Our team underwent four days of training in the spring to understand how to safely operate unmanned aerial systems.

The network's training program included airspace regulations, crew resource management, safe operation of drone systems, including aerodynamics and battery life, basic and



## UAS and SmallSat Weekly News

advanced maneuvers, emergency protocols, ethics and privacy.

As part of that effort, the Caller-Times recently played host to a Q&A to meet with local law enforcement, FAA officials and others to introduce the team and share information about the training, safety procedures and protocols we are following with drone use.

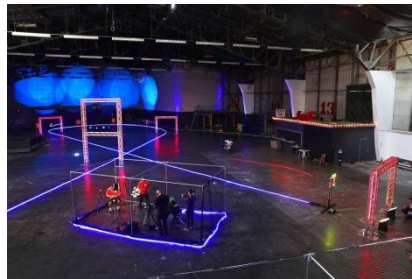


Representatives from several law enforcement agencies, the FAA and Naval Air Station-Corpus Christi, attended a community outreach meeting about the new drone program on June 1, 2017, at the Caller-Times. *(Photo: Courtney Sacco/Caller-Times)*

We want to thank those agencies - the FAA, Corpus Christi Police and Fire departments, Nueces County Sheriff's Office and NAS-CC leadership - for spending several hours discussing our unmanned aerial systems program.

<http://www.caller.com/story/news/local/2017/07/22/caller-times-drone-team-takes-storytelling-sky/367102001/>

**Drone racing lifts off, delivering 'out of body' experiences** [Benny Evangelista](#) July 23, 2017



Chronicle

Photo: Scott Strazzante, The

To date, drones are best known for aerial photography and more speculative pursuits like package delivery. But now, racing them has caught on, and some say the high-speed, relatively low-cost competition could be **the next big tech-driven sport**. In just two years, the sport has evolved from grassroots meet-ups of hobbyists gathering in parks, forests, warehouses or breweries to formal, sanctioned races and a TV series broadcast on ESPN. In September, the Reno Air Races — a showcase for regular aircraft for the last half-century — will for the first time include national championship races for drones.

Robert Rea | Axcel Innovation | Charlottesville and Portsmouth, VA  
[robert.rea@axcel.us](mailto:robert.rea@axcel.us) | 757-309-5869 | [www.axcelinnovation.com](http://www.axcelinnovation.com)





## UAS and SmallSat Weekly News

Last Thursday, San Francisco's Aerial Sports League — one of the first groups in the country to organize drone competitions — turned the Palace of Fine Arts Theater into a looping, quarter-mile indoor drone drag race course, filled with the loud whiney buzz of drones speeding more than 100 mph. The event drew 16 pilots from throughout California, from ages 11 to 45.

<http://www.sfchronicle.com/business/article/Drone-racing-lifts-off-delivering-out-of-11309712.php#photo-13280610>

### NASA Grant Funds Research Into Tracking UAVs

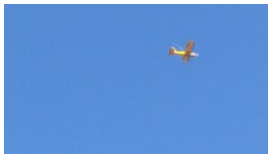


Photo credit: Andrew Bugera. Shared under a Creative Commons license.

July 24, 2017 | [Matt Shipman](#)

Researchers at North Carolina State University are launching a project aimed at researching and developing high-performance communications, networking and air traffic management (ATM) systems, including navigation and surveillance for both manned aircraft and unmanned aerial vehicles (UAVs). The work is supported by a three-year, \$1.33 million grant from [NASA's University Leadership Initiative](#).

"Our work is part of a four institution, \$4.4 million project led by the University of South Carolina," says [Ismail Guvenc](#), who is leading the effort at NC State. "Ultimately, our work will help to ensure that we have **safe airspace for UAVs and conventional aircraft**."

The NC State group will collaborate with David Matolak from the University of South Carolina (USC), Hani Mehrpouyan from Boise State University, and Benjamin Boisvert from Architecture Technology Corporation (ATCorp), in developing multi-band radio designs, "millimeter wave" (mmWave) propagation measurements/modeling, navigation and surveillance techniques for manned/unmanned aircraft, and ATM simulations. <https://news.ncsu.edu/2017/07/nasa-grant-uavs-2017/>

### How North Dakota Is Using Drones to Diversify Its Economy Eli Dile, July 24, 2017

Unmanned aircraft systems are on track to radically alter the world's airspace. Expected to become a [\\$100 billion industry by 2020](#), drones are already used to survey land, inspect infrastructure, and soon may even deliver our packages. One community leading in the development of this nascent technology is not a coastal technology hub, but **a college town in North Dakota of just over 50,000**.



## UAS and SmallSat Weekly News

The city of Grand Forks has emerged as a drone hotspot, and not by accident. The [Grand Forks Region Economic Development Corporation](#) and other **community partners have banded together to develop an ecosystem amenable to UAS research and development.**

"We're at the beginning stages of this as a commercial industry, but it's really taking off, excuse the pun," said Keith Lund, president and CEO of Grand Forks Region Economic Development.



Drones are still heavily regulated by the Federal Aviation Administration, but in late 2013, the FAA concluded a 10-month selection process and [designated six jurisdictions](#) as UAS research and test sites. Research and data from these locations aim to help safely integrate unmanned aerial vehicles (UAVs) into U.S. airspace. Those entities include The University of Alaska; the State of Nevada; Griffiss International Airport in Rome, N.Y.; Texas A&M – Corpus Christi; Virginia Polytechnic Institute; and the North Dakota Department of Commerce.

Much like with autonomous vehicle technology, the competition to become the country's drone capital is heating up. Grand Forks continues to make advances that position it ahead of competitors. Grand Sky, the United States' first commercial UAS business and aviation park, recently announced that this summer that drones will start flying [beyond the visual line of sight](#) of their pilots. And in May, Governor Doug Burgum created the "[UAS Detection and Counter-UAS Task Force](#)," which will explore solutions to threats posed by drones used for nefarious purposes.

<http://www.iedonline.org/blog/2017/07/24/innovation-and-technology/ed-now-feature-how-north-dakota-is-using-drones-to-diversify-its-economy/>

25July17

## China's Ehang to Launch Commercial Fly-by-iPad

Jul 25, 2017 [John Morris](#) | *The Weekly Of Business Aviation*



Aviation Week's John Morris checks out the Ehang 184. Don't expect a pilot report, because it's autonomous!



## UAS and SmallSat Weekly News

Chinese small unmanned-aircraft manufacturer Ehang plans the launch next year of a commercial version of its **autonomous single-passenger vertical-takeoff-and-landing air vehicle that flies without a pilot, under the control of a plug-and-play iPad.**

That vehicle will likely be larger and heavier as the current Ehang 184 is weight-limited to a single passenger of 220 lb. Whether it will have a second seat remains to be seen, Ehang co-founder Derrick Xiong told Aviation Week at EAA AirVenture.

The eight-rotor vehicle is on display here in its first presentation to an aviation audience since its unveiling in January 2016 at the Consumer Electronics Show in Las Vegas. "We want to expose it to the most hardcore aviation people in the world, and they're here at Oshkosh, before we finalize our commercial version," he said.

The vehicle currently occupies an awkward spot as being too heavy to fit the [Federal Aviation Administration](#)'s 55-lb weight limit for commercial drones, yet it cannot qualify as an experimental aircraft because it is autonomous and has no pilot. And one that carries a person, no less, for which there are no FAA regulations. "We are in discussions with the FAA," says Xiong.

<http://aviationweek.com/oshkosh-2017/china-s-ehang-launch-commercial-fly-ipad?>

## **Ocean-spanning terror drones that can fly for thousands of miles without a break could attack the US from Africa with deadly explosives**

**Sensational headline and article from the UK Daily Mail that stretches the facts...**

By [PHOEBE WESTON FOR MAILONLINE](#) 24 July 2017

'In about five years, drones will be able to be launched from Africa which can reach our shores, because they'll have permanent power by the sun', Owen West, who is a top adviser for the Pentagon's special operations and low-intensity conflicts told US lawmakers in Virginia last week, according to the report by [Defense One](#).

Last year, ISIS became the first non-state group to use commercial drones to attack their enemies. General Raymond Thomas, who is the US Special Operations commander, said their use of this technology was the 'most daunting problem' of last year.

Over the next few years experts believe electric UAS will need more powerful electric motors, lighter solar cells and flight management systems that require a minimum of human input.

One of these companies, Advanced Aircraft Company, has created a drone called **Greased Lightning which combines the best bits of drone and aeroplane design.**



## UAS and SmallSat Weekly News

It is a commercial variant of a design that was also being developed by NASA. Although it probably won't be in production for a few years it has benefited from the development of powerful electric motors.

'You have conventional airplane UAS that are launched from catapults and have large recovery equipment like nets or skyhooks or things like that', founder and CEO Bill Fredericks told Defense One.



The Greased Lightning drone is a commercial variant of a design that was also being developed by NASA. Although it probably won't be in production for a few years

'And basically those aircraft, the advantage is like a normal airplane, it gets a very good lift-to-drag ratio,' he said. 'Electric motors are really unique, and good efficiency and good power-to-weight electric motors are a relatively new thing to come to the market', Mr Fredericks said.

<http://www.dailymail.co.uk/sciencetech/article-4724260/Ocean-spanning-drones-attack-Africa.html>

## Alta Devices Joins High Altitude Technology Group 19 Jul 2017



[Alta Devices](#) has announced that it has joined with other developers of high altitude technology to create the Upper Airspace Working Group (UAWG). This group will work to tackle the challenges and opportunities associated with high altitude missions. The UAWG's founding members are Facebook, Boeing, Google, Harris, Lockheed Martin, Northrup Grumman, Rockwell Collins, AeroVironment, General Atomics and Alta Devices. **All these companies are working on major projects for flight at over 60,000 feet.**

Previously, there was little activity in this section of airspace which is above typical commercial flight altitudes. Currently, multiple commercial projects are using technologies such as HALE (High Altitude Long Endurance) UAVs, high altitude balloons and airships. Applications include mapping, transportation, surveillance and infrastructure provisioning. With multiple types of high altitude



## UAS and SmallSat Weekly News

projects in development, one common thread is that solar technology will be a component of all of them.

The UAWG will provide the AIA (Aerospace Industries Association) with strategic advice on coordination and standards for high altitude flight. One priority will be working with the global aerospace community on the development of international regulations to ensure safe and efficient operations in this airspace. <http://www.unmannedsystemstechnology.com/2017/07/alta-devices-joins-high-altitude-technology-group/>

### **Airbus Jet-Propelled UAV Demonstrator Completes First Test Flight** 21 Jul 2017



[Airbus Defence and Space](#) has announced that it has successfully tested a new type of aircraft that will aid the development of future unmanned aerial vehicles (UAVs) for series production. The unmanned jet-propelled demonstrator with the project name SAGITTA **flew completely autonomously for around seven minutes** over the test site in Overberg, South Africa, on a pre-programmed course. The flying-wing construction demonstrated favourable flight characteristics during the test. This flight marked the successful completion of the first test phase, which also comprised an extensive series of ground tests.

The demonstrator is the product of the 'Open Innovation' / SAGITTA national initiative launched by Airbus in 2010. The project sees Airbus working together with institutes from the technical universities of Munich and Chemnitz, the University of the Federal Armed Forces (Universität der Bundeswehr) in Munich, the Ingolstadt University of Applied Sciences and the German Aerospace Centre DLR to jointly develop advanced technologies for unmanned flight. The project started with a feasibility study of the flying-wing configuration.

<http://www.unmannedsystemstechnology.com/2017/07/airbus-jet-propelled-uav-demonstrator-completes-first-test-flight/>



## UAS and SmallSat Weekly News

### New Long-Distance Drone Detection Solution Revealed 24 Jul 2017



[Groupe ADP](#) and [DSNA Services](#), a subsidiary created by the French Civil Aviation Authority (DGAC), have announced that the two firms have combined their expertise to create the Hologarde project, a **drone detection system** that can be adapted to any sensitive sites requiring protection against unmanned aerial vehicles (UAVs).

Hologarde incorporates three types of technology (radar, radio frequency and HD video) into a single control centre and can detect any type of drone up to five kilometres away. It was installed for testing at Paris-Le Bourget Airport during the International Paris Air Show. The advantage of long-distance detection is the ability to anticipate and develop an appropriate response according to the nature of the intrusion. Once a drone has been detected, it can be monitored in real time with a camera through the control centre, which can be accessed from both PCs and tablets.

<http://www.unmannedsystemstechnology.com/2017/07/groupe-adp-dsna-services-announce-new-long-distance-drone-detection-solution/>

26July17

### 50 AIRPORTS TO PROVIDE AUTOMATED AIRSPACE AUTHORIZATION FOR UAS STARTING THIS FALL AUVSI NEWS JUL 21, 2017

This fall, [50 airports will begin providing Low Altitude Authorization and Notification Capability \(LAANC\)](#), which will give UAS operators the ability to “apply for **instant, digital approval** to fly in U.S. controlled airspace using the same applications they use for flight planning and in-flight situational awareness.”

Currently, FAA authorization is required for flights in controlled airspace, at certain times of day, or near sensitive locations. Authorization requests are subject to long waiting periods and labor-intensive manual approvals, which can add more time to, or entirely halt, the process of trying to fly UAS commercially. <http://www.auvsi.org/industry-news/50-airports-provide-automated-airspace-authorization-uas-starting-fall>



## UAS and SmallSat Weekly News

### EAA Embraces Drones, New Technologies

Jul 24, 2017 [John Morris](#) | *The Weekly Of Business Aviation*



*Google founder Larry Page's Kitty Hawk flying car is showing off the future at EAA AirVenture: Kitty Hawk Aero*

OSHKOSH, Wisconsin —The world's largest aerial extravaganza and de facto U.S. Air Show, EAA AirVenture, opened July 24 in Oshkosh, Wisconsin. By the end of the week more than half a million visitors will have passed through its gates to view the warbirds, homebuilt, vintage and latest production and kit-built sport aircraft on display, or discussed the latest cockpit, maintenance, avionics and training technologies with the nearly 1,000 commercial exhibitors.

Among the stars of the show are Amazon chief Jeff Bezos's Blue Origin reusable rocket and crew capsule, the world's second flying B-29 Superfortress "Doc," and man-carrying developments of **drone technologies** from China's Ehang and Google CEO Larry Page's Kitty Hawk.

Top [Airbus](#) executives are in attendance to talk about innovation for the company's push into electric propulsion and its formation of a company in Silicon Valley to pursue disruptive technologies in fields such as personal aerial transportation in congested cities.

Yet this enthusiasm for the future faces a backdrop of a declining private pilot population, and a younger generation that is **more interested in what drones and their man-carrying developments can do rather than how they work.**

The Experimental Aviation Association (EAA) has always been known as a cradle for innovation, but is that spark now being overshadowed by massive corporate spending on private space, electric propulsion and automated personal transportation?

"No," says EAA Chairman and CEO Jack Pelton who insists the organization will remain relevant in a fast-changing world. <http://aviationweek.com/technology/eaa-embraces-drones-new-technologies?NL=AW-05&Issue>



## UAS and SmallSat Weekly News

### MADISON POLICE USE 2 NEW DRONES TO INVESTIGATE CRIMES Jul. 25, 2017

MADISON, Wis. (AP) — Madison police are among a growing number of law enforcement agencies using drones to investigate crimes and track down offenders.

The Madison Police Department has used its new drone team five times since June, the Wisconsin State Journal (<http://bit.ly/2eKHSuY>) reported. Its two drones weigh between five and 10 pounds each and have three different cameras that allow them to take pictures and video. They cost a total of about \$17,500.

Lt. Mike Hanson commands the 11-member drone team. He said the drones have already been used to track fugitives and look for dementia patients who wandered off. **"They're here to stay," he said.** "We want the community to understand it's a tool for us to be able to keep them safe, and our officers." Nearly 350 law enforcement departments nationwide have purchased a drone, according to an April 2017 report from Bard College's Center for the Study of the Drone. <http://www.apnewsarchive.com/2017/Police-in-a-southern-Wisconsin-city-are-among-a-growing-number-of-law-enforcement-agencies-using-drones-to-investigate-crimes-and-track-down-offenders/id-e08acd2da5b34d939b404c04850679b5>

### Reports Of DJI Spark UAVs Falling Out Of Sky Raise Safety Concerns.

**Fortune** (7/25) reports on DJI's response to "reports that its most consumer-friendly aircraft," the Spark UAV, "is randomly plunging from the sky, a cause for concern over safety issues." According to the story, there have been reports of Spark UAVs "suddenly" turning off during operation and crashing "into various areas ranging from open fields to lakes or forests, according to at least 14 users." Although none of these incidents resulted in injury or property damage, "such instances would be possible if the drones had been operated in more crowded areas."

### Flirtey Continues to Lead Drone Delivery Industry



[July 26, 2017](#)

*July Marks The Anniversary of The First FAA-Approved Drone Delivery in the U.S. and The First Autonomous Drone Delivery to a Customer's Home*





## UAS and SmallSat Weekly News

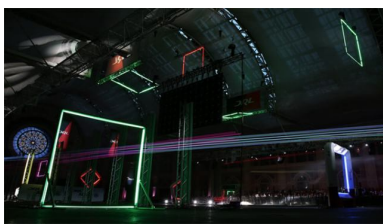
Flirtey, the world's leading drone delivery service, commemorates its milestones in aviation history as July marks the two-year anniversary of the first ever FAA-approved drone delivery in the United States and the one-year anniversary of the first drone delivery to a customer's home.

On July 17 2015, in collaboration with NASA, Flirtey conducted the first-ever FAA-approved drone delivery when it delivered multiple packages of urgent prescription medication to the Remote Area Medical health clinic in Wise, Virginia. The Virginia General Assembly unanimously passed House Joint Resolution 232 commending Flirtey for the achievement.

Flirtey CEO Matthew Sweeny, Senator Mark Warner and Governor Terry McAuliffe hailed the event the "Kitty Hawk" moment for the drone delivery industry, and Flirtey's historic delivery drone was accepted into the Smithsonian's National Air and Space Museum, which displays the Wright Flyer, the Space Shuttle Discovery, and the first aircraft operated by FedEx.

<http://uasweekly.com/2017/07/26/flirtey-continues-lead-drone-delivery-industry/>

27July17



[July 26, 2017](#)

## The DRL Premiers Allianz World Championship Race 2017 Season Finale On ESPN

The Drone Racing League (DRL), the global leader in professional drone racing, announced the premiere of the 2017 Allianz Circuit Season Finale, the Drone Racing World Championship, airing on ESPN this Friday, July 28 at 9 PM EST. Following an epic playoff race in Munich and an electrifying 2017 season, the world's eight best drone pilots face-off at the DRL Allianz World Championship at the iconic Alexandra Palace in London, fighting to be crowned the World's Greatest Drone Pilot.

"The 2017 DRL Allianz season has been incredible, featuring the world's best drone pilots and the craziest, three dimensional race courses ever created," said DRL Founder and CEO Nicholas Horbaczewski, "The talent of the pilots and competition continues to improve every race, and we can't wait to deliver the London Championship to our growing fan base around the world."



## UAS and SmallSat Weekly News

At the 2017 season finale DRL pilots face a daunting course at the iconic Alexandra Palace, hitting speeds of more than 80 MPH and navigating razor sharp turns and **the first ever FPV Power Loop, a series of light gates stretching across 180 degrees and forcing the drones into an inverted dive at full speed.** [http://uasweekly.com/2017/07/26/drl-premiers-allianz-world-championship-race-2017-season-finale-espn/?utm\\_medium=push\\_notification&utm\\_source=rss&utm\\_campaign=rss\\_pushcrew](http://uasweekly.com/2017/07/26/drl-premiers-allianz-world-championship-race-2017-season-finale-espn/?utm_medium=push_notification&utm_source=rss&utm_campaign=rss_pushcrew)

### Know Before You Fly Reaches Major Milestone with More than 500,000 Unique Visitors to Website July 26, 2017

*Drone safety campaign urges visitors to learn the guidelines before taking to the skies*

**WASHINGTON** — [Know Before You Fly](#) announced today more than 500,000 unique users have visited its website since the launch of the unmanned aircraft systems (UAS) education campaign in December 2014.

An estimated 700,000 UAS were to be sold in the United States in 2015, according to the [Consumer Technology Association](#). In addition, more than 425,000 people have registered their drones since Dec. 21, 2015, according to the [Federal Aviation Administration](#) (FAA). The robust traffic to the Know Before You Fly website is evidence that **the safety campaign is potentially reaching the majority of people flying or interested in flying UAS.**

<https://www.dronenewz.info/uncategorized/know-before-you-fly-reaches-major-milestone-with-more-than-500000-unique-visitors-to-website-12/>

### 3 Drone Companies to Invest in Today

*The drones are coming. In fact, they're already here.* Rich Smith ([TMFDitty](#)) Jul 21, 2017

Depending on whom you ask, [drones went mainstream in 2015](#) -- or maybe it was 2013, or 2017. One thing is clear: Watching the local fireworks display this past July 4th, I counted no fewer than half a dozen drones hovering above the festivities, their LEDs glowing steadily among the explosions.

I'd say that's pretty "mainstream." If you've been holding off on investing in drone stocks to see if drone technology is a fad that will fade or a new fixture of daily life, well, that debate is over.

**Drones are here to stay** -- and it's time for us to find some drone companies to invest in.

Which companies, precisely? For various reasons, I think you should give serious consideration to three drone stocks: **AeroVironment** ([NASDAQ:AVAV](#)), **Boeing** ([NYSE:BA](#)), and **Northrop Grumman** ([NYSE:NOC](#)).



## UAS and SmallSat Weekly News



*AEROVIRONMENT'S QUANTIX DRONE IS HELPING LIFT IT INTO THE TOP RANKS OF LEADING DRONE COMPANIES. IMAGE SOURCE: AEROVIRONMENT.*

Let's start with AeroVironment, the clear leader among publicly traded drone companies selling small drones to the military (civilian drone technology remains [mostly the domain of private companies](#)). Since its inception, AeroVironment has sold tens of thousands of Raven, Wasp, and other small "unmanned aerial vehicles" to the U.S and other militaries around the world. Wall Street believes it will sell tens of thousands more drones before it is done. According to data from [S&P Global Market Intelligence](#), the average expectation among analysts who follow AeroVironment is that this stock will grow its earnings at nearly 36% annually over the next five years. <https://www.fool.com/investing/2017/07/21/3-drone-companies-to-invest-in-today.aspx>

### **Russian scientists put a defibrillator on a drone** [Natasha Lomas \(@riptari\)](#)

In what looks like a potentially useful use of drone technology, Russian scientists at the Moscow Technology Institute have stuck a defibrillator on a drone so it can be remote piloted to a person in need of cardiopulmonary resuscitation. The project is a collaboration between the Aerospace Laboratory of the Moscow Technological Institute (MTI) and Russian medical equipment company, Altomedika.

The range of the Russian drone is up to **50km**, according to a spokesman, and it's capable of carrying a **3kg payload**, with the designers touting "compact dimensions" which they say make their drone "versatile in use". Of course there still needs to be a human at the landing site to connect the electrodes and follow on screen and/or voice prompts so treatment can be carried out.

"The defibrillator will analyze the ECG, store data for a doctor and, if necessary, produce a series of discharges in accordance with international recommendations on cardiopulmonary resuscitation." <https://techcrunch.com/2017/07/27/russian-scientists-put-a-defibrillator-on-a-drone/>



## UAS and SmallSat Weekly News

28July17

### Spot Nearby UAVs With DeTect's DroneWatcher App

*"DroneWatcher" will spot and alert users of any nearby UAVs in order to assuage privacy concerns.*

[BY MARCO MARGARITOFF](#) JULY 26, 2017

Florida-based company [DeTect](#) has released "[DroneWatcher](#)," an Android app for Amazon Fire Tablets and Android smartphones that will notify users of any nearby unmanned aerial vehicles (UAVs).

[According to DroneLife](#), the application is aimed at both private and corporate sectors, as both citizens and businesses alike have the desire to know who and what is invading their airspace.



DETECT INC.

With the Pro version of DroneWatcher, you can connect multiple phones or tablets to form a pretty solid mesh-network of sorts, through which all connected devices will inform each other of how many and which kinds of UAVs are flying in each individual device's area. The range is adequate, detecting drones from a quarter mile to half a mile.

[According to DroneLife](#), once a drone has been spotted, users will receive its make and model, as well as log its ID number to a database. Added to that, the Pro version sports a "power bar" which points users in the general direction of the drone's operator. As it stands, DroneWatcher **detects around 85 percent of unencrypted, WiFi or RF controlled UAVs in the sky**. That's pretty impressive and worth taking a gander at. <http://www.thedrive.com/aerial/12855/spot-nearby-uavs-with-detects-dronewatcher-app>

### UK government's drone collision report criticized 27 July 2017



GETTY IMAGES



## UAS and SmallSat Weekly News

The Drone Manufacturers Alliance Europe (DMAE) has questioned the evidence gathered in the report and says some of the testing is flawed. According to the UK Airprox Board, there have been **70 near-misses involving drones in 2016**, more than double the year before.

DMAE, which accounts for almost 80% of the civil drones operating in the world, said it wanted the department to release the full testing methodology and results of its Mid-Air Collision Study. "There have been no confirmed collisions anywhere in the world between a modern consumer drone and a traditional aircraft, and drone manufacturers are working diligently on technological solutions to prevent any such collision," DMAE's Daniel Brinkwerth said. <http://www.bbc.com/news/technology-40738948>