



UAS and SmallSat Weekly News

Contents

- 2 BGE will test use of drones to inspect power lines**
- 2 LA Drone Film Festival winners raise the bar for drone cinematography**
- 2 The DJI Mavic Air Is the Most Fun I've Ever Had Flying a Drone**
- 3 Ehang's 184 in Manned Flight Tests**
- 4 The Drone Analyst: Four Commercial Drone Trends to Watch in 2018**
- 4 After the Storm: How Drones Help in Disaster Recovery**
- 5 INSIDE THE OLYMPICS OPENING CEREMONY WORLD-RECORD DRONE SHOW**
- 6 Venture Capital Follows Space Model, Flows To Urban Air Mobility**
- 7 What Role Will Drones Play in Aerial Data Acquisition Ecosystems?**
- 7 Kittyhawk Builds the Drone Infrastructure of the Future**
- 8 Medical supply drone deliveries coming to North Carolina**
- 9 A Drone Just Helped Researchers Spot a 70-Ton Swarm of Jellyfish**
- 9 Here's how Intel produced that amazing drone show at the Winter Olympics**
- 10 Poland is implementing a nationwide DroneRadar UTM system**
- 10 Airbus Aerial launches commercial drone research centre in Singapore**
- 11 Airbus Skyways Singapore parcel delivery drone makes first flight**
- 12 Europe's inaugural 5G drone flight**
- 12 Canadian defence department seeks prototype Canadian UAV detection system**
- 13 Woolpert Partners with Savannah/Hilton Head International Airport on Drone Utilization**
- 13 Turf Maintenance Company Invests in GreenSight for Drone Remote Sensing**
- 14 CybAero Providing Unmanned Helicopters for Missing People Sweden**
- 14 PrecisionHawk Acquires Droners.io and AirVid, Creating Giant UAS Pilot Network**
- 15 New Delair Drone Combines LiDAR Sensing With RGB Camera Imagery**
- 15 MIT's new mapping technology makes drones wicked fast and great at dodging things**
- 16 How Delivery Drones Can Help Save The World**
- 16 Drone's Close Encounter With Jet Spurs Call to Tighten Laws**
- 17 Skydio R1: America's Belated Response to DJI's Dominance**
- 17 Why drones are better at counting things than people**
- 18 DroneClash – the competition where drones go to war**
- 19 Proposed drone facility in York County wins grant money**



UAS and SmallSat Weekly News

10Feb18

BGE will test use of drones to inspect power lines [Lorraine Mirabella Contact Reporter](#)

The Baltimore Sun

Baltimore Gas and Electric Co. will start testing the use of drones to inspect overhead power lines and poles. In a pilot program starting Friday, drones equipped with cameras will do inspections that BGE workers now do from the ground with binoculars or by climbing poles.

The drones will take closer looks at pole level and above and shoot photos and video to check for damage or deterioration, said Jarrett Carter Sr., a BGE spokesman. During the pilot, BGE will train employees to be federally licensed as drone pilots and determine which areas are best suited to the technology, Carter said.

Exelon utilities ComEd in Chicago and PECO in Philadelphia already use drones to inspect power lines. In early 2015, ComEd became **the first electric utility** to get [Federal Aviation Administration](#) permission to use the unmanned aircraft systems.

<http://www.baltimoresun.com/business/bs-bz-bge-drones-electric-lines-20180208-story.html>

LA Drone Film Festival winners raise the bar for drone cinematography [Loz Blain](#)

February 6th, 2018



Screen grab from the winner of the best Dronie from this year's LA Drone Film Festival

The Los Angeles Drone Film Festival, which celebrates the art of drone cinematography, has concluded and the winners announced.

Although drones are still a relatively new addition to the world of filmmaking, the festival has attracted a pretty stunning collection of super-short films and it's awesome to see the creative ways these unmanned aircraft are being used. **Let's dive in:** <https://newatlas.com/la-drone-film-festival-winners/53290/>

The DJI Mavic Air Is the Most Fun I've Ever Had Flying a Drone [ALEX](#)

FITZPATRICK February 7, 2018

DJI's latest effort is the **\$799** Mavic Air, a foldable drone designed to be stuffed into a backpack and taken on all manner of adventures without sacrificing image and video quality.



UAS and SmallSat Weekly News



Among the best features are a couple of new “QuickShot” modes. One mode, “Boomerang,” commands the drone to swing around a subject in grand fashion; it’s best used for selfie shots of you looking out towards an epic view. Another, “Asteroid,” tells the drone to pull back from a subject, shoot into the sky and create a wild multi-image panorama stitched together like a tiny planet. These **QuickShot modes are the highlight** of DJI’s drones, letting even rookie drone pilots create top-notch video results.

Racers will like Mavic Air’s “sport mode” too. Toggling a switch on the controller turns on this setting and unleashes a speed demon drone capable of zipping along at about 42 miles per hour. Mavic Air’s “Advanced Pilot Assistance Systems” uses the drone’s onboard sensors to detect obstacles in its flight path and chart a course around them without a pilot’s input.



On other drones, the battery is partially exposed. But on the Mavic Air it’s tucked safely into the heart of the fuselage, giving it more protection. The antennae are embedded inside the landing gear, a move that should improve connectivity between the aircraft and the remote control. That remote control, meanwhile, has a built-in cable for connecting your smartphone, as well as removable joysticks for easier transportation. These are little tweaks on their own, but they add up to a more refined experience than on models past.

<http://time.com/5137462/dji-mavic-air-review/>

Ehang’s 184 in Manned Flight Tests Malek Murisonon: February 06, 2018

This week the company has released a major update on the progress of the 184.

Ehang’s passenger drone has undergone extensive testing, including over 1,000 manned test flights. **This is exciting progress from Ehang.**

So far, more than 150 technical engineers have conducted thousands of test flights. According to Ehang, these have included a vertical climbing test up to 300m, a loaded test flight carrying approximately 230 kg, a route-based test flight covering 15km, and a high-speed cruising test at 130km/h.



The company has suggested that more improvements are in the pipeline, which look set to give passengers more control over the 184’s flight. The big question remains: When will the 184 passenger drone be ready to go mainstream? The company has permission [to test in the United States](#) but any major adoption – particularly for



UAS and SmallSat Weekly News

public use – looks unlikely in the near future. <https://dronelife.com/2018/02/06/ehang-184-manned-flight-tests/>

The Drone Analyst: Four Commercial Drone Trends to Watch in 2018 Colin

Snowon: February 08, 2018



Guest post by leading drone industry analyst Colin Snow of [Skylogic Research](#).

This post offers our specific predictions for 2018, including investments, technology improvements, ecosystem partnerships, and software innovations.

1. Investment and testing will continue in earnest on Unmanned Traffic Management (UTM) and beyond visual line of sight (BVLOS) operations.
2. You'll see more news on improved sensors, hardware integration, networking, and processing.
3. Look for more partnerships, software, and innovations coming from the DJI Enterprise ecosystem.
4. Software will dominate advancements.

It's not a drone market, **it's a data and information market.**

Listen to the companion podcast here <http://bit.ly/2CXe6uK>. If you have questions about what's in [the report](#) I mention or would like to comment, write me at colin@droneanalyst.com. <https://dronelife.com/2018/02/08/the-drone-analyst-four-commercial-drone-trends-to-watch-in-2018/>

After the Storm: How Drones Help in Disaster Recovery Miriam McNabbon February 06, 2018



During a disaster like the Houston hurricanes this year, drones proved invaluable in assessing road conditions, assisting rescuers to find stranded victims, and capturing storm footage. In the California wildfires, Los Angeles firefighters used drones to help strategize: to monitor the fire, keep firefighters safe, and identify hotspots.

[Soaring Sky](#), a drone service and training company based in Florida, has been working with insurance companies nationwide to improve disaster management and structural inspections. "The use of the latest drone technology is safer, more efficient, and more cost-



UAS and SmallSat Weekly News

effective than traditional methods," says Soaring Sky. Aerial imagery provides the needed precision and detail allowing adjusters to zoom in and inspect roofs with incredible accuracy. "The images can also be used to take precise measurements without setting a foot on a roof," says Cowell.

Soaring Sky has flown over more than **800 homes** throughout the state of Florida **in the past two months** alone. Some insurance companies using drones say that they can double the number of assessments processed in a day. <https://dronelife.com/2018/02/06/storm-drones-help-disaster-recovery/>

INSIDE THE OLYMPICS OPENING CEREMONY WORLD-RECORD DRONE SHOW

BRIAN BARRETTBRIAN BARRETT GEAR 02.09.18



Intel's Shooting Star drones form the Olympic rings for the Pyeongchang opening ceremonies.

THE OPENING CEREMONY of any [Olympics](#) provides pageantry at a global scale, a celebration that, at its best, can create moments every bit as indelible as the games themselves. In Pyeongchang, those watching the curtain-raiser at home also witnessed a sight never seen before: a record-setting **1,218 drones joined in a mechanical murmuration.**

Drone shows like the one on display at the Pyeongchang Games have taken place before; you may remember the [drone army that flanked Lady Gaga](#) at last year's Super Bowl. But the burst of drones that filled the sky Friday night—or early morning, depending on where in the world you watched—comprised four times as many fliers. Without hyperbole, there's really never been anything like it.

As at the Super Bowl, the Pyeongchang drone show comes compliments of Intel's Shooting Star platform, which enables a legion of foot-long, eight ounce, plastic and foam quadcopters to fly in sync, swooping and swirling along an animator's prescribed path.



Intel's Shooting Star drones are about a foot-long, weigh eight ounces, and can fly in formation for up to 20 minutes.

<https://www.wired.com/story/olympics-opening-ceremony-drone-show/>



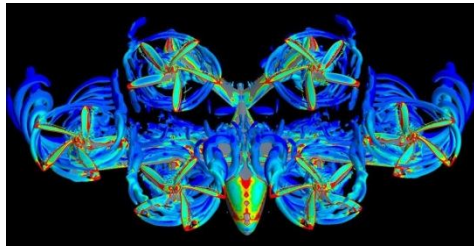
UAS and SmallSat Weekly News

Venture Capital Follows Space Model, Flows To Urban Air Mobility *Feb 7, 2018*

Graham Warwick | *Aviation Week & Space Technology*

It began in the space sector and spread to the drone business. Now venture capital is flowing into the nascent urban air mobility market and related fields of electric propulsion and autonomous systems. It is risky, but emboldened by the success of [SpaceX](#) and encouraged by the involvement of big names such as [Airbus](#) and [Boeing](#) in air taxis, investors are seeing the potential for rich rewards in the fledgling industry.

The venture capital arms of [JetBlue Airways](#), Toyota and Intel are among the investors plowing \$100 million in Series B funding into Joby Aviation to take its five-seat electric vertical-takeoff-and-landing (eVTOL) aircraft to certification. This **is the biggest infusion of capital yet into the sector**, and takes the total **raised by Joby to \$130 million**. In September 2017, Germany's Lilium secured \$90 million in Series B funding led by China's Tencent, taking its total to \$100 million. In August 2017, carmaker Daimler led a \$30 million investment round in Germany's Volocopter.



Money begins to flow into electric VTOL as vehicle developers make progress Credit: Joby Aviation

Joby is further ahead in development than most, which counts when it comes to raising venture capital. Founded in 2009, the Santa Cruz, California-based startup has been **secretly** flying a full-scale prototype of its tilt-prop eVTOL for about a year. Lilium will not fly its five-seater until 2019, but in April 2017 it flew an unmanned prototype of its original two-seat design to demonstrate its tilting ducted-fan propulsion. The two-seat, 18-rotor Volocopter has been flying manned since 2016 and late last year began autonomous air taxi trials in Dubai. http://aviationweek.com/future-aerospace/venture-capital-follows-space-model-flows-urban-air-mobility?NL=AW-05&sfvc4enews=42&cl=article_3&utm_rid=CPEN1000003332045&utm_campaign=13575&utm_medium=email&elq2=2ac84fdaea22413fa356f072e8345676

What Role Will Drones Play in Aerial Data Acquisition Ecosystems? *Jeremiah*

Karpowicz Power, Process & Utilities, February 7, 2018



When it comes to commercial UAV adoption, more and more people have begun to talk about the [data as opposed to the drone](#), which underscores the importance of the data being gathered, regardless of how it's captured. It's a

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



UAS and SmallSat Weekly News

concept [Airbus Aerial](#) has literally taken to new heights, since they're focused on **integrating data** via platforms that vary **from satellites to drones** and adapting it to help solve industry-specific problems.

As the President of Airbus Aerial, figuring out the best data acquisition approach is something Jesse Kallman has helped a variety of organizations determine. It's also a topic he's set to explore in-depth during his upcoming [Commercial UAV Europe](#) keynote, [The Future of Aerial Data: Leveraging Data from the Sky](#). Jesse will share Airbus' vision for the emerging commercial drone market, how high atmospheric aircraft will change the game for data collection, and how to effectively approach integrating and utilizing data captured from a variety of aerial platforms.

To get a better sense of the specific info Jesse will be able to share with the audience, we caught up with him to ask about the impact of regulation on the drone market, how expectations around aerial data acquisition have changed, what it can mean for an organization to use drones to create efficiency and plenty more. You can read his interview here: https://www.expouav.com/news/latest/role-will-drones-play-aerial-data-acquisition-ecosystems/?utm_source=informz&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter

Kittyhawk Builds the Drone Infrastructure of the Future *Feb 6, 2018* Kelsey

Atherton | *Aviation Week & Space Technology*

For drones to reach the full commercial potential imagined by their advocates, they are going to have to move beyond pilots. Once a user has set up the app, they are greeted with a map of their immediate area, a summary of flight conditions and a flight deck that shows what drone the user is connected to, and any traffic advisories.



Poking around in the app while writing this, I discovered the coffee shop I was working from was within 5 mi. of a helipad and within a few thousand feet of both a school and a hospital—both locations inadvisable to fly over. If I had a DJI-made drone, I could sync it with Kittyhawk's app and fly it through that same app.

"As you're flying, you get full head-up display, the telemetry; all of it's updated in real time," says Joshua Ziering, Kittyhawk co-founder. "As soon as you land, all this information is available to you—the distance, the height, the number of hours—and you can check out all the telemetry in the app or



UAS and SmallSat Weekly News

the desktop client." Users can opt to send that data as it is recorded to Kittyhawk, where it is analyzed and used to better understand how the drones work in practice.

The Kittyhawk app includes a feature allowing **autonomous flight** where a user simply plots waypoints and sets elevations for the drone to fly, and the vehicle will execute those instructions on its own. Waypoint navigation is not new to the world of personal drones, even if some methods for setting up waypoint flights are aggressively complex. What stands out about the Kittyhawk app is not how it handles an individual drone, but how it manages **a whole inventory of drones** and a team of drone users. <http://aviationweek.com/future-aerospace/kittyhawk-builds-drone-infrastructure-future>

Medical supply drone deliveries coming to North Carolina February 10, 2018 Audrey Zhang



approved.

The long-promised drone revolution for medicine could soon be a reality in North Carolina if the North Carolina Department of Transportation's application to a test pilot, federally-funded program to explore drones for use in medical supply transportation is

A test program would involve establishing a series of distribution centers using unmanned aircraft systems (UAS) like drones for medical delivery across North Carolina. The companies signed on to the project, Matternet and Zipline, currently operate in Europe but not in the United States.



A Zipline drone makes a delivery. The California-based start-up company is part of a team led by the N.C. Department of Transportation that is seeking FAA approval to test the use of drones to make medical deliveries in North Carolina.

Bobby Walson, the state Director of Aviation, said "We're really excited that drone technology may allow doctors and hospitals to save more lives in North Carolina soon...We've been researching and investing in drone technology for years at NCDOT. This proposal represents the next big step for us as we remain a national leader in the UAS field." The North Carolina Department of Transportation application for the federal program is **one of about 210** to the Federal Aviation Administration's Drone Integration Pilot Program. <https://www.wetalkuav.com/drone-based-medicine-delivery-coming-north-carolina/>



UAS and SmallSat Weekly News

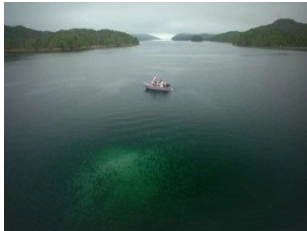
11Feb18

A Drone Just Helped Researchers Spot a 70-Ton Swarm of Jellyfish MARCO

MARGARITOFF FEBRUARY 9, 2018



[According to Mental Floss](#), a group of researchers just used this modern aerial tool to measure the size of a jellyfish swarm in British Columbia, Canada, which weighed more than 70 tons. “The size of the bloom surprised me. What was exciting was going from not being able to see the bloom easily, if at all, to instantly being able to find them from the air. It is remarkable how tightly they group together.”



Drones have been used to study the patterns and behaviors of ocean life ([and those who disturb it](#)) before, but this particular instant points toward a shift in approach, regarding scientific research. As Hunt himself alluded to, **without the UAV in tow, his team might not have spotted this swarm at all**. [Hunt reportedly claimed](#) that this was the first time a drone was used to spot and study jellyfish blooms, a dramatic change from the previous standard of observing the species from the water’s surface level. <http://www.thedrive.com/aerial/18379/a-drone-just-helped-researchers-spot-a-70-ton-swarm-of-jellyfish>

Here’s how Intel produced that amazing drone show at the Winter Olympics Josh

Katzowitz—Feb 10



It broke a world record. One of the most mesmerizing moments of the Winter [Olympics](#) opening ceremony on Friday was the image of **more than 1,200 drones** working in unison to make the image of a snowboarder that then transformed into the Olympic rings. According to [AdWeek](#), [Intel](#) broke its own world record for the number of drones used with 1,218, and the idea of the performance was to enthrall. <https://www.dailydot.com/debug/drone-show-winter-olympics-opening-ceremony-intel/>

12Feb18

Poland is implementing a nationwide DroneRadar UTM system February 9, 2018

Philip Butterworth-Hayes UAS traffic management news



UAS and SmallSat Weekly News

Poland is implementing a nationwide UTM system based on the DroneRadar (<https://droneradar.eu/>) flight planning/authorisation app.



Around **1,100 drone operators are daily** using DroneRadar’s airspace status and flight authorisation tool; the DAMS (Drone Awareness and Monitoring System) is now **fully integrated** within the airspace planning system of the national air navigation service provider, the Polish Air Navigation Services Agency (PANSA).

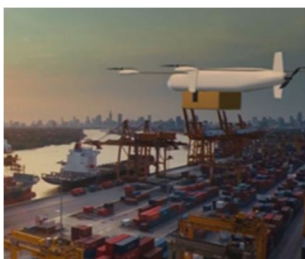
The smart phone/tablet based tool has three major functions:

- It analyzes the airspace environment based on aeronautical data supplied by AIP Poland, airspace use plan and NOTAMs illustrating the airspace situation with three green, yellow, red lights to show the availability of airspace in terms of time and place.
- Second, it offers the possibility of two-way non-verbal communication between air traffic services (ATS) and the drone operator, providing exchange of information on flight approvals and updates.
- Third, it provides an automated, bi-directional emergency response service where the air traffic service operators can inform drone users about a requirement for immediate landing – where emergency helicopter operations are required, for example, or where the drone operator can report a loss of control over the drone. This information is transmitted electronically to the PAZP services

At the start of 2018 the tool was processing around **60,000** airspace availability **checks a month**. <http://www.unmannedairspace.info/uncategorized/poland-implementing-nationwide-droneradar-utm-system/>

Airbus Aerial launches commercial drone research centre in Singapore February 7, 2018 Philip Butterworth-Hayes UAS traffic management news

Airbus announced at the Singapore Air Show on 7 February that it has launched the Asia-Pacific operations of its “Airbus Aerial” commercial drone services in Singapore.



“The first target of the Singapore team will be to explore potential within the Asian regional insurance market and extend Airbus Aerial’s footprint from the U.S. and Europe to the Asia-Pacific region,” according to the company. “It will gather information to provide relief



UAS and SmallSat Weekly News

and recovery in disaster prone regions with dedicated disaster management support, and also identify local possibilities including agriculture, critical infrastructure monitoring like power lines and railroad, and oil and gas mining where the business model may fit. Airbus Aerial Asia also aims in the next years to offer cargo drone services with autonomous logistic systems.

“We have chosen Singapore as the headquarters for our Asia-Pacific operations because it is a well-established regional hub with excellent connectivity to key countries such as Australia, India, Japan and China,” said Jana Rosenmann, Head of Unmanned Aerial Systems at Airbus. “It is also a great centre for innovation and potential partnerships, enjoying strong support from the local government for start-ups as well as the development of smart technologies.”

<http://www.unmannedairspace.info/uncategorized/airbus-aerial-launches-commercial-drone-research-centre-singapore/>

Airbus Skyways Singapore parcel delivery drone makes first flight February 8, 2018

Philip Butterworth-Hayes UAS traffic management news



Airbus Helicopters' Skyways unmanned air vehicle has successfully completed its first flight demonstration at the National University of Singapore (NUS), says the company. The drone took off from its dedicated maintenance centre and landed on the roof of a specially designed parcel station where a parcel was automatically loaded via a robotic arm.

Once successfully loaded with the parcel, the Skyways drone took off again and returned to land, demonstrating its automatic unloading capability.

This inaugural flight demonstration follows the launch of the experimental project with the Civil Aviation Authority of Singapore (CAAS) in February 2016 to develop an urban unmanned air system to address the safety, efficiency, and sustainability of the air delivery business in cities such as Singapore. The collaboration was subsequently extended in April 2017 with Singapore Post (SingPost) becoming the local logistics partner to the project. This concept involves systems and structures that allow drones to land, dock with secure structures, discharge or take on payloads, and then fly off to other destinations.

<http://www.unmannedairspace.info/uncategorized/airbus-skyways-singapore-parcel-delivery-drone-makes-first-flight/>

Europe's inaugural 5G drone flight February 12, 2018 Audrey Zhang



UAS and SmallSat Weekly News



With Europe's inaugural 5G drone flight, T-Mobile is demonstrating with technology partner Huawei that next-generation mobile communication is fast enough to control a drone in real time, and also transmit a high-resolution camera image of the drone.

While drones can already follow a programmed flight route, **it has not been possible so far to control drones efficiently using mobile communications**. In such cases, a Wi-Fi signal is often used to maintain contact between pilot and drone, notwithstanding the limitations associated with the range and transmitter.



Dr. Thomas Pühringer, IKB Chairman: "For T-Mobile to roll out the 5G mobile network across Austria, it needs regional partners that meet the high standards required by fiber-optic networks. IKB has the necessary infrastructure in place here in Innsbruck and can support mobile video streaming, HD streaming, and many other data-intensive applications." <https://www.wetalkuav.com/europes-inaugural-5g-drone-flight/>

Canadian defence department seeks prototype Canadian UAV detection system

February 9, 2018 Philip Butterworth-Hayes Counter UAS systems tenders

Defence R&D Canada (DRDC) has been working on a counter-UAV study in collaboration with defence partners under The Technical Cooperation Program (TTCP). The current researches are focused on investigating optimum Electronic Attack (EA) methods to jam UAV payload and guidance systems, as well as using lasers to take down hostile drones. It is a challenge to detect and track flying drones because they are small.



The purpose of this challenge is **to identify a system to search and track Unmanned Aerial Vehicles**. The system will be used to detect and track both slow speed and small size drones, as well as the large-size and high-speed drones. The requirement is for a single solution which consists of radar sensor, video tracker, interface box, and corresponding signal/image processing and information fusion algorithms. *Reference number: PW-18-00815694 Solicitation number: EN578-DB1707/A Deadline: 1 March 2018* <http://www.unmannedairspace.info/counter-uas-systems-tenders/canadian-defence-department-seeks-prototype-canadian-uav-detection-system/>



UAS and SmallSat Weekly News

Woolpert Partners with Savannah/Hilton Head International Airport on Drone Utilization SAVANNAH, GA. (PRWEB) FEBRUARY 12, 2018



Savannah/Hilton Head International Airport ([SAV](#)) is partnering with [Woolpert](#) to integrate unmanned aircraft system (UAS) technologies into airport operations. SAV is **the first** commercial service airport to formally integrate drone technologies into its regular operational programs for inspection, maintenance, monitoring and facility management, including supporting its Part 139 inspection protocols. SAV is integrating UAS, which will be a force multiplier for their wildlife and security operations.

Woolpert Vice President and Geospatial Aviation Practice Leader Thomas Mackie said the adoption of UAS to address wildlife management/hazard mitigation and daytime perimeter surveillance was completed in January. Mackie said these areas of operation support SAV's commitment to safety management and were of the highest priority on a list of applications developed **to test the integration of this technology at an airport**.
<http://www.prweb.com/releases/2018/02/prweb15191384.htm>

13Feb18

Turf Maintenance Company Invests in GreenSight for Drone Remote Sensing [Betsy Lillian](#) February 8, 2018



The Toro Co., a provider of solutions for the outdoors, has announced a strategic minority equity investment in GreenSight Agronomics, a Boston-based provider of a drone intelligence platform for turfgrass and agricultural markets.

The company says the new investment will further its efforts in turf sensing technology to help golf course professionals improve turf and water management practices. Terms of the transaction were not disclosed.

GreenSight's patent-pending system, which combines automated drones and sensors, provides thermal mapping and detection analytics to help golf course professionals improve turf health with less labor. The technology enables customers to identify issues before they become visible and achieve better outcomes with less water, fertilizer and pesticide use. The company [recently received](#) a Part 107 waiver from the Federal Aviation Administration for **operating beyond the**



UAS and SmallSat Weekly News

visual line of sight of the operator. https://unmanned-aerial.com/turf-maintenance-company-invests-greensight-drone-remote-sensing?utm_medium=email&utm_source=LNH+02-13-2018&utm_campaign=UAO+Latest+News+Headlines

CybAero Providing Unmanned Helicopters for Missing People Sweden Betsy Lillian February 8, 2018



CybAero, a Swedish developer of unmanned aircraft, has [signed](#) a collaboration agreement with Missing People Sweden, a nonprofit organization that helps families and police arrange search efforts and publish notices of missing people.

When needed, CybAero will provide Missing People with its unmanned helicopters. The drone manufacturer says Missing People will be able to search for people in difficult-to-reach areas in a more timely and cost-efficient manner. https://unmanned-aerial.com/cybaero-providing-unmanned-helicopters-missing-people-sweden?utm_medium=email&utm_source=LNH+02-13-2018&utm_campaign=UAO+Latest+News+Headlines

PrecisionHawk Acquires Droners.io and AirVid, Creating Giant UAS Pilot Network Betsy Lillian February 8, 2018



PrecisionHawk will merge the companies to form a network of more than **15,000** commercially licensed drone pilots – making it **the largest of its kind**, the company claims.

PrecisionHawk, which is based out of Raleigh, N.C., says it will continue to connect certified unmanned aircraft systems (UAS) pilots directly to customers. In addition, it will use the network to service its growing base of enterprise customers in insurance, agriculture, energy, construction and government.

The company says it will focus on growing its newly formed network of certified pilots both nationwide and abroad. Part 107-certified UAS pilots can join the network and start accepting jobs in their region by creating a profile at www.droners.io.

“We believe that a drone pilot network is one of the fundamental building blocks of a successful drone ecosystem,” says Brown. The announcement comes just two weeks after PrecisionHawk [closed \\$75 million](#) in Series D funding. https://unmanned-aerial.com/precisionhawk-acquires-droners-io-airvid-creating-giant-uas-pilot-network?utm_medium=email&utm_source=LNH+02-13-2018&utm_campaign=UAO+Latest+News+Headlines



UAS and SmallSat Weekly News

New Delair Drone Combines LiDAR Sensing With RGB Camera Imagery Betsy

Lillian February 12, 2018



Delair, a France-based supplier of drone solutions for commercial industries, recently introduced the [Delair DT26X LiDAR](#) unmanned aerial vehicle (UAV), a long-range, fixed-wing drone that combines LiDAR sensing capabilities with an integrated, high-resolution RGB (red, green, blue) camera.

According to Delair, aerial-based LiDAR allows for extremely detailed and accurate collection of elevation data of the ground – even in large and vegetated areas – but it is typically performed with specialized, single-function platforms or expensive, manned aircraft with long lead times. In addition, camera-enabled drones offer a complementary solution for collecting imagery to augment the LiDAR-based models. Applications include environmental and land surveys, forestry monitoring, infrastructure surveillance, power line and pipeline inspections, and road and rail construction. Its long-range capabilities facilitate coverage of up to **2,400 square acres, a communication range of 30 kilometers and 100 minutes of flight time**, says Delair.

“The combination of a sophisticated LiDAR sensor and an industrial-grade RGB camera removes the ‘either/or’ decision of choosing between LiDAR and imagery data acquisition for geospatial professionals. https://unmanned-aerial.com/new-delair-drone-combines-lidar-sensing-rgb-camera-imagery?utm_medium=email&utm_source=LNH+02-13-2018&utm_campaign=UAO+Latest+News+Headlines

MIT’s new mapping technology makes drones wicked fast and great at dodging things February 13, 2018 Feilidh Dwyer



Scientists at MIT’s Computer Science and Artificial Intelligence Laboratory (CSAIL) have developed small, ultra-quick drones, capable of **autonomously navigating through unfamiliar environments at great speed**.

The drones use a system called NanoMap, which models uncertainty of the drone’s position over time to more reliably navigate through new places. It uses depth-sensing technology to gain a sense of its surroundings and can simultaneously consult a database of all the places it has ever travelled to predict how to most effectively move through environments it can’t immediately see.

<https://www.wetalkuav.com/mits-drones-wicked-fast-and-great-at-dodging/>



UAS and SmallSat Weekly News

14Feb18

How Delivery Drones Can Help Save The World Eric Mack , CONTRIBUTOR FEB 13, 2018

A [new study published Tuesday in Nature Communications](#) led by researchers at Lawrence



Livermore National Laboratory and Carnegie Mellon University finds that using relatively small quad- or octo-copters instead of diesel-burning delivery trucks could mean a reduction in both energy consumption and release of greenhouse gases that contribute to climate change.

The study also acknowledges that **energy use** and pollution reductions **could actually go up** with drone delivery under certain scenarios, like if such a service requires much more warehousing space than anticipated or if trucks and other ground vehicles continue to become more efficient. All those [orders for Tesla's electric semi truck](#) come to mind here.

The temptation with drone delivery may be for such small copters to deliver heavier packages and over longer distances as the technical capability and efficiency of drones improves. However, this will increase energy use per package, reducing the environmental benefit of taking those packages off of trucks.

"**The focus of drones should be on light packages**, with heavier packages left for ground vehicles," the researchers write. <https://www.forbes.com/sites/ericmack/2018/02/13/delivery-drones-amazon-energy-efficient-reduce-climate-change-pollution/#5463d5e16a87>

Drone's Close Encounter With Jet Spurs Call to Tighten Laws Alan Levin February 13, 2018

A [video](#) from a drone that flew within feet of an airliner over Las Vegas and prompted **outrage** on the internet has spurred three influential U.S. aviation lobbies to call for tighter regulations on hobby drones.

Legislation exempting certain hobbyist drone pilots from oversight by the Federal Aviation Administration has hampered the aviation agency's ability to oversee safety of drones, according to a letter sent Monday to lawmakers. The letter was from [Airlines for America](#), a trade group representing large carriers, and the [Air Line Pilots Association](#) and the [National Air Traffic Controllers Association](#), the unions that represent pilots and controllers.



UAS and SmallSat Weekly News

"We strongly urge you to remove legislative restrictions that have been placed on the FAA that limit its safety oversight of UAS," the letter said, referring to drones as unmanned aircraft systems. "The likelihood that a drone will collide with an airline aircraft is increasing. By providing the FAA with the full authority to regulate all UAS operations, the safety of passenger and cargo flights will be protected." <https://www.bloomberg.com/news/articles/2018-02-13/drone-s-close-encounter-with-airliner-spurs-call-to-tighten-laws>

15Feb18

Skydio R1: America's Belated Response to DJI's Dominance Malek

Murisonon: February 13, 2018



California startup Skydio has today launched a drone that looks capable of competing at the very top of the market. Our first impression of the R1 is that it's **perhaps the most technologically sophisticated drone the market has seen**. The Skydio [website](#) argues as much, calling it "The most advanced autonomous device – of any kind – available today."

That's because the R1 is **fully autonomous**. It appears to be the selfie-taking, 4k-filming, flying action cam that the market has been waiting for. Plenty of drone manufacturers out there have launched products with the promise of being totally hands-free. But Skydio's R1 looks like it's ready to deliver that and much more besides.



This new level of autonomy has been honed over a number of years by a founding team from MIT, who concluded their computer vision research by flying [a fixed-wing drone autonomously through an underground parking garage](#). So perhaps we shouldn't be so surprised.

The R1 is primarily a flying camera that positions itself where it needs to be and has enough awareness of the world around it to avoid obstacles with ease and plan paths around them. Its vision system is made up of 13 cameras along its exterior and an NVIDIA Jetson chip most commonly used in self-driving vehicles. The R1 is available for a **\$2,499**.

<https://dronelife.com/2018/02/13/skydio-r1-america-dji-dominance/>



UAS and SmallSat Weekly News

Why drones are better at counting things than people February 15, 2018 Feilidh Dwyer



A University of Adelaide study has shown that drones are much better method of monitoring the number of wildlife in a given area than traditional (human) counting methods.

In this particular experiment, Australian researchers, led by ecologist Jarrod Hodgson, set up a method of measuring the accuracy of the drones ability to determine the number of birds (fake ducks) compared to people.



To do this, the team used a beach in Adelaide and laid down thousands of fake ducks in ten different colony formations. The numbers of birds in a given colony ranged from 460 to 1020.

A group made up of experienced wildlife researchers was tasked with estimating the number of birds in each colony using the traditional method: sitting in a spot far away from the birds (so as not to disturb them) and make a count using binoculars, telescopes and a grid estimation system. Up against them was a drone flying between 30 and 120 meters above the colony, snapping photos using a time-lapse feature and being monitored by bird watchers, who would also make their own count.

The drone counts were generally **between 43 and 96 per cent more accurate** than the numbers reached by the ground-based ecologists. The results have been published in the journal [Methods in Ecology and Evolution](https://www.wetalkuav.com/why-drones-are-better-at-counting-animals-that-animals/). <https://www.wetalkuav.com/why-drones-are-better-at-counting-animals-that-animals/>



UAS and SmallSat Weekly News

16Feb18

DroneClash – the competition where drones go to war February 14, 2018 Feilidh Dwyer



[DroneClash](#) is hosted by the Southern city of Delft (population 100,000) and the city university's Micro Air Vehicle (MAV) Lab. The competition is billed as the ultimate place for competitors to put their flying skills to the test.

Reminiscent of the [Robot War TV series](#), people gather together and do their utmost to destroy, down or otherwise damage other drones, often with a roaring crowd in attendance.

The eight teams which enter the competition must compete through several stages: First, the teams must battle each other head-to-head in an arena. Using weapons ranging from blades to flamethrowers, each team tries to takedown as many of the opposing teams drones as possible.

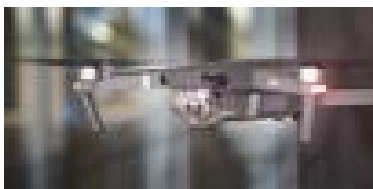


Next, the surviving drones must try to make it through the "Hallway of Doom, Death and Destruction" and attempt to escape the reach of counter-drone weapons.

At last, as if reaching a final boss in a video game, they come to the "Palace of the Four Queens." Each team must defend their "Queen" drone as they try to obliterate other Queens.

The information and data harnessed from this event is intended **to help advance anti-drone technology**. To learn more about this event, [check out their video!](#)
<https://www.wetalkuav.com/droneclash-the-competition-where-drones-go-to-war/>

Proposed drone facility in York County wins grant money [Josh ReyesContact Reporter](#)York/Poquoson reporter



A proposed unmanned systems facility for testing drones in York County is getting some money to get off the ground.

The idea is to turn a 192-acre former state fuel farm off Penniman Road into a place for businesses to test drones, possibly leading to an industrial park for those businesses and **a park for drone hobbyists**. The



UAS and SmallSat Weekly News

land is now unused and is an approved [Federal Aviation Administration](#) fly zone.

Go Virginia awarded \$150,000 to the project, which is sponsored by all localities on the Peninsula. The localities will also put up \$150,000 to match the award.

That pool of money will go to preliminary work for the project, like forming a regional industrial facilities authority and consulting with an engineering firm to determine the project's feasibility, according to Jim Noel, York County's economic development director.

<http://www.dailypress.com/news/york-county/dp-nws-york-county-drone-park-grant-20180214-story.html>