UAS and SmallSat Weekly News

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West Virginia House Would Make Some Drone Use Criminal Jan. 25, 2018 AP

CHARLESTON, W.Va. (AP) — The West Virginia House on Thursday approved limits on drone use in the state with criminal penalties for adding weapons, harassing others, interfering with airplanes or taking photographs of people through the windows of their homes without permission.

The bill, adopted 78-18, would establish a misdemeanor for operators of unmanned aircraft to knowingly view or take pictures or videos of people on private property where a reasonable expectation of privacy is violated. It also would be a low-level crime to intentionally harass someone or fly it with "wanton disregard" of others' safety or property, in violation of a restraining order or in a way that interferes with police or emergency medical personnel.

The measure was prompted by a particular incident in which a visiting couple saw a drone hovering over the bathroom window at their daughter's home, said Delegate Tom Fast, a Fayetteville Republican. He said the drone was operated by a registered sex offender from a nearby yard, who claimed on Facebook that there was no law against it. The possible misdemeanor penalty would be up to a year in jail and a fine of $100 to $1,000.
https://www.usnews.com/news/best-states/west-virginia/articles/2018-01-25/west-virginia-house-would-make-some-drone-use-criminal

Lawmakers back state application for advanced drone testing Jan 25, 2018

The state's application to join a Federal Aviation Administration initiative to develop and enforce drone regulations has the enthusiastic backing of New York's senior U.S. senator and three area U.S. representatives.

A key New York participant in the UAS [unmanned aerial system] Integration Pilot Program would be the Northeast UAS Airspace Integration Research Alliance, a coalition of private and public entities and academic institutions that manages the drone test site at Griffiss International Airport.

The program follows a directive from Trump to initiate a pilot program to safely test and validate advanced drone operations through various partnerships across the country with oversight by the FAA. Industries that could see opportunities from the program include commerce, photography, emergency management, precision agriculture, and infrastructure inspections and monitoring.

"NUAIR and their outstanding team has put Central New York and the Mohawk Valley on the map as a leader in UAS research and testing – and being designated by the FAA to participate in the prestigious UAS Integration Pilot Program will launch the region's efforts to the next level," said Schumer.

The new program is meant to evaluate a variety of operational concepts, including night operations, flights over people, flights beyond the pilot's line of sight, package delivery, detect-and-avoid technologies, counter-drone security operations, and reliability and security of data links between operators and aircraft, as well as local management of UAS operations subject to FAA review. A minimum of five partnerships will be selected later this year, according to the Department of Transportation. http://romesentinel.com/county/lawmakers-back-state-application-for-advanced-drone-testing/QBqray!nBorPWX0a79VDWw4RMRXA/

The 20-ton Payload Cargo Drone: Bigger (Much Bigger) Drone Deliveries Miriam McNabbon: January 24, 2018

There's a new drone company in China, and its already making its mark. Founded in 2016, drone manufacturing firm Tengoen has already made significant inroads in the military market. Now the company is working to bring that technology to the commercial sector.

"In the cargo and delivery space, Tengoen is already at work building an eight-engine drone with a wingspan of more than 137 feet to carry a payload of 20 tons up to 4,660 miles," reports Popular Science. "That's akin to a medium-sized manned cargo plane."

"The carbon-fiber, double-bodied drone carries the payload module between the two fuselages (looking a bit like a robotic baby brother to the Scaled Composites Stratolaunch)," says Popular Science. "It is being built at Tengoen's facility in Chengdu, and it's supposedly taking flight in 2020." https://dronelife.com/2018/01/24/20-ton-payload-cargo-drone-bigger-better/

BCC to offer drones program in fall BUSINESS FARM GENERAL / BY PATTY DECKER / ON JANUARY 24, 2018
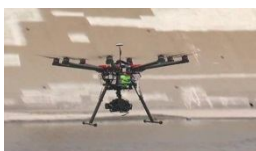
Starting in the fall of 2018, students at Butler Community College can learn to fly a drone thanks to a partnership between the college and Kansas State Polytechnic in Salina.

"K-State Polytechnic was the first entity in the country to receive approval from the FAA to conduct academic and commercial flight training," Moran said.

Lori Winningham, BCC vice president of academics, said these unmanned aircraft systems are a growing industry, could lead to careers in law enforcement, real estate, agriculture and more. As an example, in agricultural and energy fields, drones can be used to gather aerial photographs from soil management to power line inspections.

It's one of the first, and still one of the few universities in the country, to offer a bachelor's degree in this area. https://www.hillsborofreepress.com/businessfarm/business-farm-general/bcc-to-offer-drones-program-in-fall

The Past, Present And Future Of Anti-Drone Tech JAN 26, 2018 Jon Hegranes CEO & Co-Founder of Kittyhawk,

Barely a week goes by without drone operators making news for the wrong reasons. Collisions with manned aircraft, unauthorized flights above sporting events and contraband deliveries into prisons litter the headlines.

As the use cases for drones continue to expand exponentially for good actors and bad actors alike, we are starting to see the inevitable rise of a counter-drone industry -- one that offers ways to identify and mitigate the threats posed by drones to protect sensitive infrastructure.

How Could Counter-Drone Tech Evolve In The Future?

Countermeasures will have to adapt and evolve in step with all this advancing aerial technology. One obvious challenge is posed by the inevitable increase in autonomy. In a few short years, commercial and consumer drones will be able to operate with an even greater amount of independence than imagined today. And because technology is improving so rapidly, they may no longer rely upon GPS or radio signals to do so.

In this scenario, a flying robot with no centralized command and control presents a unique type of threat. The irony is that brute force kinetic techniques again become the most effective.

In the meantime, concerned entities are going to have to take a multi-pronged approach to drone countermeasures. This means a combination of situational awareness, real-time identification, access to centralized registration databases and the technological capability to do something with that information under pressure.

https://www.forbes.com/sites/forbestechcouncil/2018/01/26/the-past-present-and-future-of-anti-drone-tech/#2b977e5d52d6

Sailors on Aircraft Carriers Could Guide Drones With a Wave of Their Hands Kyle Mizokami Jan 26, 2018

On the busy, noisy flight deck of an aircraft carrier, ground crews talk to pilots with a shared language of hand gestures. Now, as the Navy prepares for drones to share the flight deck, it may teach the machines to understand those same gestures.

Earlier this decade, the Navy ran a series of tests with the X-47B Unmanned Combat Air System drone. In those tests, UCAS was controlled on the ground with a wireless handheld device.

The problem with using a handheld device on a carrier flight deck is that the deck is constantly changing, with aircraft and vehicles constantly moving around and posing a potential hazard. If a deck crewman controlling a drone is looking down at a device, then they're not paying attention to everything going on around them.

A new gesture-recognition system developed by Systems Technology Inc. (STI) is teaching drones to understand the same kind of gestures used by deck crews for nearly a hundred years.

STI's system involves putting sensors in the signal wands used by aircraft directors that a drone can interpret into commands. The system, known as Deck Intelligent Aircraft Body Language Observer (DIABLO) uses machine learning to interpret the commands properly. Deck handlers have simulated moving an aircraft from the carrier's aircraft elevators to a position on the ship's catapult. Gesture recognition is reportedly in the "90-100% range."
http://www.popularmechanics.com/military/aviation/a15885921/drones-aircraft-carriers-hand-gestures/

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2 Top Drone Stocks You Shouldn't Miss Harsh Chauhan (TechJunk13) Jan 27, 2018

NVIDIA and Intel are pursuing the drone market from separate paths.

The use of drones is growing, with Gartner estimating that drone shipments in 2017 increased 39% from the previous year to 3 million units, generating $6 billion in revenue. This exciting growth is set to continue with estimates pegging the market's revenue increasing to $11.2 billion by 2020.

With such rapid growth at stake, technology giants Intel (NASDAQ:INTC) and NVIDIA (NASDAQ:NVDA) are stepping up their drone development programs. The chipmakers are using their expertise in computer vision and artificial intelligence (AI) to make a dent in this space, and they could turn out to be two of the best bets to buy into this market. Let's see why.

INTEL'S FALCON 8+ DRONE

NVIDIA is trying to harness the power of its graphics processing units (GPUs) to accelerate drone development. Last year, the graphics specialist announced the Jetson TX2, a chip platform the size of a credit card, which enables AI in a wide range of devices, including drones.

Intel is serious about the commercial drone market. It has developed a full suite of products targeting this space, beginning with the Falcon 8+ drone system. The Falcon 8+ is designed for professional applications like industrial inspection and accurate data collection for mapping. https://www.fool.com/investing/2018/01/27/2-top-drone-stocks-you-shouldnt-miss.aspx

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Police departments debate use of drone technology January 29, 2018 Audrey Zhang

 The public is wary of drones in the consumer sector, let alone in the hands of government, it seems. The technology could have widespread use in police applications, however, so it might be premature to dismiss it entirely out of fear.

The LAPD's announcement of a one-year pilot program back in August 2017 outlined the various uses the police department would explore. For example, the department cited drone use in finding missing persons.

In a plan presented by the LAPD, the program will make use of small drones measuring a foot in length and seven and a half inches in height in situations including hostage negotiations, bomb threats, or in active-shooter scenarios. The main purpose of the drones would be in information gathering and keeping officers out of harm's way.

Any program initiated by the LAPD will have to comply with FAA regulations concerning unmanned aerial systems. Throughout the one-year trial program the LAPD hopes to keep civic groups involved in the discussion around the department's drone use in the field.
https://www.wetalkuav.com/police-departments-debate-use-drone-technology/

Madison police say drone program has been successful January 27, 2018

MADISON, Wis. (AP) — The Madison Police Department says its drone technology has proven successful in its search-and-rescue operations and crime scene mapping.

Madison is one of a growing number of police agencies that have purchased drones for public safety efforts, the Wisconsin State Journal reported.

A 2017 report by the Bard College Center for the Study of the Drone found that around 347 state, local and county police, fire and emergency departments have purchased a drone in the United States. Wisconsin accounts for 18 of those agencies.

Lt. Mike Hanson is commander of the department's drone team. Hanson said that Wisconsin police must obtain a warrant before using a drone to gather evidence where someone may have a reasonable expectation of privacy. He said the team is figuring out best practices for the drones, but that feedback from the public and lawmakers has been positive.

"For us it's been a year of learning, training, testing," Hanson said. "We know that we like this program. We want to see it grow over the years."
http://www.houstonchronicle.com/news/article/Madison-police-say-drone-program-has-been-12530294.php

New York State Fair to host 2nd drone video competition January 27, 2018

SYRACUSE, N.Y. (AP) — Entries are being accepted for the second annual Drone Film Festival and Competition at the New York State Fair.

There are eight categories, including one for films featuring New York state. At least half of each video must be shot using a drone or other unmanned aerial vehicle.

Entries must be uploaded at the event's site on FilmFreeway.com by the end of June. Fees for most entries are $25. The competition will be professionally judged and winners in each category will be eligible for a $250 prize.

Last year's Best in Show video was about using a drone to deliver medicine to save a snakebite victim in the Amazon rainforest. Other winners presented views of the Erie Canal, Alaska and Iceland. http://www.houstonchronicle.com/news/article/New-York-State-Fair-to-host-2nd-drone-video-12530197.php

Aims to Meet Tactical, Target Drone Demand With New Oklahoma Facility Jane Edwardson: January 29, 2018, Industry News

A Kratos Defense & Security Solutions division has opened an 8,800-square-foot facility in Oklahoma City to house engineering, production and administrative operations as the company anticipates an increased demand for target and tactical unmanned aerial systems.

Kratos intends to move into a 75,000-square-foot facility in Oklahoma within six months to support initial manufacturing operations with plans to hire more than 350 employees in the state in the next few years.

Steve Fendley, president of Kratos' unmanned systems division, said there has been a substantial rise in orders for military target drones as the company's clients replace their current fleets of UAS.

The launch of the new Oklahoma facility came three weeks after the company secured a $23 million contract to produce a jet-powered drone system for an undisclosed client and a month after it received a potential five-year, $93 million contract to deliver target drones to the U.S. Army. http://blog.executivebiz.com/2018/01/kratos-aims-to-meet-tactical-target-drone-demand-with-new-oklahoma-facility/

Learn the business of drones at the Academy of Art January 27, 2018 Audrey Zhang

The Academy of Art in San Francisco is excited to offer classes in the piloting and business of drone cinematography and videography. Drones represent one of the greatest paradigm shifts for both casual and professional photography and videography that students who are proficient in the art of unmanned aerial systems will have a leg up over students who do not have such a skill set.

All students will first learn how to tackle aerial photography and videography using a drone, learning the techniques used by industry professionals and the best practices that create dynamic, breathtaking shots.

 Drones represent the evolution of the helicopter shot and the expensive aerial footage of the past. No longer do media firms need to employ large, expensive pieces of aerial equipment for a shot; further, they no longer need put pilots and journalists in harm's way. Instead, both large and small firms can deploy cost-efficient drones for similar effect, saving on expense and promoting a safer way or obtaining the same shot.

Students at the Academy of Art will focus on the art of storytelling through imagery with drones. Their unmanned aerial systems training will focus on using drones for amazing, one-of-a-kind shots in addition to learning the methods used by the best in the industry.
https://www.wetalkuav.com/drones-classes-academy-art/

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Primoco drones ready for production January 30, 2018 Audrey Zhang

Model One 100 and One 150 from Czech company Primoco UAV SE were certified by the Civilian Aviation Authority and are ready for production. The total development time for the drone technology was three years – lightening speed in the tech world.

 The Model One 100 and One 150, with 8 and 10-hour endurance, were also designed according to the principles of civilian aircraft since many of the intended applications involved deployment near civilians. Primoco prides itself on sourcing almost 80% of the components for its drones from within the Czech Republic itself. If it cannot be found in the Czech Republic, the company is sure to source the best components from abroad including parts from Spain and Norway.

Another innovative feature is the drone's modular design that allows for a large variety of customization and additional features. While the drone is targeted at the Russian market, Primoco is looking beyond Russia to other potential markets for their drones as well. In fact, some of the first production craft from Primoco will be heading to Iraq in fulfillment of a Ministry of the Interior order there. https://www.wetalkuav.com/primoco-drones-ready-production/

Drone school takes off in Delaware Shirley Min January 29, 2018

Drone Workforce Solutions was opened with a $59,000 Delaware Dept. of Labor grant. The money covered tuition, normally $6,000 per student, for 12 students in DWS' inaugural class.

Taught inside the New Castle County Chamber of Commerce space on the Wilmington Riverfront, students took part in a 10-week, 70-hour curriculum that combined classroom work with hands-on flying time.

"We train people who are interested in getting into drone technology by teaching them how to fly drones, how to pass the Federal Aviation Administration exam, how to edit the data that they get and how to build a drone," Nix explained.

While there are other drone schools in Delaware, and plenty of online courses to choose from, Nix said what separates DWS from other drone training programs is that it's also an employment/referral agency. He wants to develop the premier database for all 66,000 FAA-certified drone pilots across the country. Then when jobs come in from employers, he can act as a middleman matching drone pilots to specific jobs depending on what's required. https://whyy.org/articles/drone-school-takes-off-delaware/

AI-Fueled Drone Software Company Secures First Seed Funding Betsy Lillian January 25, 2018

Converge, a commercial drone software provider, has secured more than $750,000 in seed funding. This is the first seed funding for the company, which was founded by alumni from The Massachusetts Institute of Technology.

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The initial round of funding included investors Samsung NEXT, Techstars Ventures and Kima Ventures, as well as other angel investors.

Headquartered in San Francisco, Converge is developing artificial intelligence (AI)-fueled software for drones. The Converge app enables service providers and businesses to automate and integrate drones into their existing workflows, the company explains. The software has already been piloted by a selection of drone service providers and one of the largest construction companies in Florida, notes Converge. Since closing the funding, Converge says it has been able to run a deployment of its AI-powered software for commercial drones with over 50 adjusters at a global insurance company. https://unmanned-aerial.com/ai-fueled-drone-software-company-secures-first-seed-funding?utm_medium=email&utm_source=LNH+01-30-2018&utm_campaign=UAO+Latest+News+Headlines

How Drones, Artificial Intelligence Impacted Hurricane Irma Claims Response David Lyman January 26, 2018

One of the most critical factors in post-catastrophe claims processing is capturing and documenting the situation on the ground. Traditionally, this is done using on-the-ground claims adjusters and is supplemented by imagery captured from airplanes or satellites. Unlike satellites or airplanes, drones can fly a few feet away from the surface of a home, apartment building, high-rise or even stadium to document the damage to the top and sides of these structures.

"While the FAA had flight restrictions in place to ensure the safety of manned aircraft engaged in disaster relief operations, the System Operations Support Center of the FAA was operating in full force to provide authorizations for unmanned aircraft operations within restricted areas." In most cases, we had the authorization letter back in the same day."

Working with the FAA, Betterview's in-house team developed new flight plans for Florida. Normally, flight plans for claims are extremely detailed and usually capture tile-by-tile detail. Due to the volume of potential claims, our customers were looking to expedite the claims process for their clients by identifying full or partial losses and capturing the right amount of imagery for documentation, analysis and reporting. https://unmanned-aerial.com/drones-artificial-intelligence-impacted-hurricane-irma-claims-response?utm_medium=email&utm_source=LNH+01-30-2018&utm_campaign=UAO+Latest+News+Headlines

New York State Fair Launches Another Drone Film Festival and

Competition Betsy Lillian January 29, 2018

New York Gov. Andrew M. Cuomo has announced that the Great New York State Fair's Drone Film Festival and Competition has opened for entries.. The competition is open to all amateur, professional and corporate filmmakers who use video from drones in their work.

Central New York and the Mohawk Valley are home to New York State's Drone Corridor, a 50-mile area devoted to UAV research and development.

"We are building the unmanned aerial vehicle industry from the ground up in Upstate New York, with the goal of becoming a global hub in drone research and development," Cuomo says. "This film festival and competition highlights our investment and draws attention to the amazing work being done with drones, while continuing the economic growth seen in central New York." https://unmanned-aerial.com/new-york-state-fair-launches-another-drone-film-festival-competition?utm_medium=email&utm_source=LNH+01-30-2018&utm_campaign=UAO+Latest+News+Headlines

NSF Grant to Advance N.Y. Tech Company's Drone Navigation Platform Betsy Lillian
January 29, 2018

Syracuse, N.Y.-based AutoModality Inc. has been awarded a National Science Foundation (NSF) Small Business Innovation Research grant for $225,000 to conduct research and development on navigation capabilities of unmanned aircraft systems (UAS) with respect to object detection and sense-and-avoid.

AutoModality's Perceptive Navigation drone platform enables fully autonomous infrastructure inspection, especially in areas that are difficult to navigate, pose safety risks and are often GPS-denied, such as under bridges, inside buildings and tunnels, and across challenging terrains.

AutoModality will be doing the research in collaboration with Syracuse University. "This is a great opportunity for faculty researchers to partner with regional business and industry interests to pursue innovations that address real-world needs," adds John Liu, vice president for research at Syracuse University. "The practical implications for this project speak to the value of cross-sector research collaborations to advance the capabilities of cutting-edge technology in ways that also drive economic growth." https://unmanned-aerial.com/nsf-grant-advance-n-y-tech-

companys-drone-navigation-platform?utm_medium=email&utm_source=LNH+01-30-2018&utm_campaign=UAO+Latest+News+Headlines

CAMCOPTER UAS Demonstrates Search and Rescue Capabilities 25 Jan 2018 Caroline Rees

In the first operation of its kind, Schiebel provided Austrian law enforcement with a CAMCOPTER S-100 and operating personnel to assist in the search for a double homicide suspect assumed to be hiding in a forest region.

Compared to manned helicopters, the S-100 offers a more cost- and mission-effective solution for conducting such exploration tasks. Its endurance of up to six hours within a 200-km radius provides the S-100 with enhanced operational capability that enables substantially extended search flight missions. This unique unmanned system permits operatives to systematically cover larger areas and gather crucial intelligence in the form of real-time day and night electro-optical / infrared video footage in less time. http://www.unmannedsystemstechnology.com/2018/01/schiebel-camcopter-uas-demonstrates-search-rescue-capabilities/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=cc03e2fe26-eBrief_2018_Jan_30&utm_medium=email&utm_term=0_6fc3c01e8d-cc03e2fe26-111778317

From Kigali to Khartoum: Africa's drone revolution David Child

Zipline use their fleet of drones to supply hospitals in Rwanda with blood products [Zipline/Al Jazeera]

While inventors and entrepreneurs in Western countries struggle with strict regulations, many African countries are proving very innovative and accepting in terms of drone usage across industries. In Rwanda, drones deliver blood to almost half of the country's blood transfusion centres. In Malawi, UAVs deliver HIV test kits to and from remote parts of the country. Elsewhere, drones are used to combat poaching, track illegal maritime activities and oil spills, or to augment safaris.

Never before have doctors and patients in remote **Rwanda** received blood so quickly and efficiently. Silicon Valley robotics company, Zipline, has partnered with the Rwandan government to

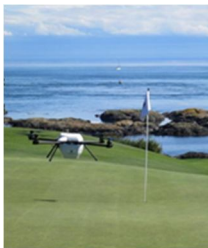deliver blood to hospitals and blood transfusion centres across Rwanda - using special delivery drones.

Determined to stop the desert from swallowing up their country, two Sudanese inventors have spent years building **Sudan's first flying robot farmer** - a drone that can plant trees, increase harvests and reduce crop damage.

In **Nigeria,** archaeologists have started to use drones to detect, map and view archaeological sites in Ile-Ife, the cradle of the Yoruba civilization. Saving archeologists a considerable amount of time and money, the UAVs have aided the discovery of city walls, abandoned settlements, pottery sheds, ceremonial pits, and a series of other archaeological materials created by the Yoruba people during the 10th-12th centuries. http://www.aljazeera.com/indepth/features/africa-drone-revolution-180123090528801.html

GREENSIGHT AGRONOMICS RECEIVES WAIVER FROM FAA FOR BVLOS UAS OPERATIONS AUVSI NEWS JAN 24, 2018

UAS services and agricultural intelligence provider GreenSight Agronomics has announced that on Dec. 15 of last year, it was granted a waiver from the FAA to operate its UAS beyond visual line of sight (BVLOS).

With this waiver, GreenSight, which provides daily monitoring services at top-5 agrochemical company test sites, golf courses, and farms, will be able to operate its UAS remotely from its Boston command center. The waiver still requires a local visual observer, though.

According to GreenSight, its proprietary UAS "has racked up impressive reliability numbers," accumulating more than 500 hours in the air with no incidents. In limited release for last year, GreenSight captured more than 100,000 acres of imagery at customer locations in the US, Canada and Europe.

The company says that it delivers "actionable alerts" on soil moisture, pest stress, and nutrient deficiency to land managers, thanks to the combination of autonomy, custom sensors, and machine learning based data analytics technology. http://www.auvsi.org/industry-news/greensight-agronomics-receives-waiver-faa-bvlos-uas-operations

This drone learned to fly thanks to driverless cars 01.29.18

University of Zurich researchers built an AI that flies around on a drone telling it how to navigate the streets thanks to data gleaned from self-driving cars and GoPro-toting bicycles.

In a new paper appearing in *IEEE Robotics and Automation Letters*, Davide Scaramuzza and PhD student Antonio Loquercio laid out the work they've done training an autonomous drone to fly through the streets of a city using data collected by cars and bicycles. The AI-equipped drone takes that data, builds a map, locates itself on the map, and then plans a route, using images from a camera to provide speed and steering commands, follow road markings, and avoid collisions. https://www.fastcompany.com/40523375/this-drone-learned-to-fly-thanks-to-driverless-cars

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Air Taxi takes flight at CES January 30, 2018 Thomas Luna

Autonomous drone taxis are already being tested in places like Dubai, and YouTubers have even created their own manned aerial vehicle out of a bathtub in Germany, but one drone taxi actually flew on American soil during CES. Volocopter and Surefly were two air taxis that were featured at the Las Vegas Convention Center, but only the Volocopter made a test flight because of the rain.

The creation of **Volocopter** started five years ago in Germany, but it is estimated to officially release in 2023. It has 18 propellers, nine batteries, and it has a flight time rated at 30 minutes. Volocopter has redundancies and even emergency parachutes for its two passengers, but the microprocessors that monitor the environment for turbulences and winds were implemented for a safe and smooth flight. Besides the ongoing test flights in Dubai, Volocopter received a permit to fly in Germany, where it flies regularly.

"Although the Volocopter might resemble a Helicopter, it really is a flying super computer creating pleasant and safe ride," said Florian Reuter, CEO of Volocopter.

Surefly was created by an Ohio-based company called Workhorse. Unlike the Volocopter, Surefly was made to be a personal Helicopter, but it will be priced to be around

$200,000. The model displayed at CES featured a carbon fiberfinish rather than the stock white color. Carbon fiber seemed like it would make the drone-like aircraft difficult to see at night, but then again, that is what lights are for.

Both aerial vehicles are on the horizon to change how humans travel. With an increase in traffic, air taxis and drone-like vehicles are the solution for today's transportation problems.

https://www.wetalkuav.com/air-taxi-takes-flight-at-ces/

YouTubers partake in drone jousting to the death! January 29, 2018 Thomas Luna

By taking two drones and strapping them with wooden sticks, drone jousting was invented. One example of this possible sport can be seen in YouTuber Sam and Niko's video.

The idea of medieval jousting was to take two high speed horsemen, equipped with lances, and ram them into each other. The last man standing would be declared as the victor. YouTubers Sam and Niko took that same idea and converted their toy drones into jousting machines. In attempt to recreate the high fatality rate that was notorious with the sport of jousting, the drones battled on top of water, which meant the loser's drone would fall to its death.

https://www.wetalkuav.com/youtubers-partake-in-drone-jousting-to-the-death/

Anti-drone tech deployed at Davos World Economic Forum January 31, 2018 Audrey Zhang

Police in Davos, Switzerland were spotted using machine-gun like anti-drone technology ahead of the famous economic forum of the same name. The anti-drone technology is being used to head off a potential use of UAVs to surveil, photograph, or, in a worst case scenario, even launch an attack on the luminaries gathered for the oft protested summit.

The HP 47 works by disabling the drone's ability to send and receive signals and turning off remote access. The jammer should also disable the drone's video feed. Instead of just falling out of the sky, the drones will hover in place while some agent like a sniper destroys them. In less dramatic fashion, a rocket propelled net could also bring the drone down. https://www.wetalkuav.com/anti-drone-tech-deployed-davos-world-economic-forum/2/

An overview of the global solar-powered UAV market 2017-2021 January 30, 2018 Audrey Zhang

The drone market is one of the fastest growing in the world and the solar-powered UAV segment in particular is projected to grow at a rate of 12.65% between 2017 and 2021.

Many UAVs are powered by either internal combustion engines or electrical motors, but recent developments made UAVs powered by photovoltaic cells, hydrogen fuel cells, and hybrid-electric propulsions engines possible. A proton exchange membrane, or PEM, makes it possible for a UAV to fly for six months without need for rest. AeroVironment's Helios concept in 1999 was one of the first to use a PEM-based fueling system.

Helios in flight

Applications for such drones are widespread with both commercial and defense sectors. The report *Global Solar-*

powered UAV Market 2017-2021 compiles in-depth analysis with inputs from a wide-variety of industry experts. Special attention is paid to AeroVironment, Airbus, Alphabet, Facebook, and Thales Group. The comprehensive report can be found at www.researchandmarkets.com/research/wgtvr6/global https://www.wetalkuav.com/global-solar-powered-uav-market/

1Feb18

Texas Parks & Wildlife Has Life-Saving Plans for New Drone Betsy Lillian January 31, 2018

The new drone, a DJI Inspire 2, was donated through the Texas Parks and Wildlife Foundation's Gear Up for Game Wardens program, which has generated over $100,000 in private donations thus far to fund purchases of specialized equipment for state game wardens, according to TPWD.

"With this drone, we may be able to search for missing persons in situations where we can't use the manned aircraft. During those down times, this craft could be the difference-maker in getting help and saving lives."

The unit's camera payload allows for real-time broadcast, which can provide a live HD video feed to a TV screen or monitor. This feature can give rescuers and command staff a live view, enabling them to make immediate and appropriate decisions that save lives, says TPWD.

"The UAS will equip our warden first responders with the ability to identify dangers such as swift water, downed powerlines and hazardous materials. Identifying these threats allows for greater safety of victims, as well as wardens." https://unmanned-aerial.com/texas-parks-wildlife-lifesaving-plans-new-drone?utm_medium=email&utm_source=LNH+02-01-2018&utm_campaign=UAO+Latest+News+Headlines

New AeroVironment Drone, Sensor and Software Solution Available for Farmers Betsy Lillian January 31, 2018

Monrovia, Calif.-based AeroVironment Inc has announced that its automated Quantix hybrid drone and

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AeroVironment Decision Support System (AV DSS) analytics software are now available for farmers through its authorized reseller network.

Debuted in late 2016, the Quantix drone features simple, automated flights and a hybrid design that allows the aircraft to launch vertically and transition into horizontal flight. A Quantix hybrid drone and one-year subscription to AV DSS has an MSRP of $16,500, the company says.

The complete solution includes an automated Quantix hybrid drone with integrated true-color and multispectral cameras; a controller tablet with flight software and Quick-Look maps to conduct in-field assessments; a battery and charger; and a one-year subscription to AV DSS software, delivering image processing, advanced analytics, comparative analysis and historical reporting. Users can also download the AV DSS Survey Mobile App, which allows them to collect and upload georeferenced images and notes automatically to AV DSS. https://unmanned-aerial.com/new-aerovironment-drone-sensor-software-solution-available-farmers?utm_medium=email&utm_source=LNH+02-01-2018&utm_campaign=UAO+Latest+News+Headlines

Silicon Valley Start-Up Raises Millions for UAV Risk Management Platform Betsy Lillian January 31, 2018

 Palo Alto, Calif.-based SkyWatch, a data analysis, risk assessment and risk reduction platform for the drone industry, has raised $2 million in a seed round led by F2 Capital, Verizon Ventures and Kaedan Capital.

SkyWatch says it will use the financing to continue building its platform – enabling drone service providers to track important safety metrics during pre-flight, flight execution and post-flight – as well as building on-demand insurance solutions.

The application will connect to most unmanned aerial vehicles (UAVs) and allow operators to get real-time hazard warnings based off of the drone's telemetry by calculating a proprietary "safety score" for each flight, based on the operator's behavior.

SkyWatch says the safety score can be used to set an industry benchmark for operators, who will be more aware of how they fly and will be able to improve their score as they practice. Additionally, the company plans to offer operators unique, on-demand insurance solutions

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based on this proprietary safety score in coordination with insurance carriers. https://unmanned-aerial.com/silicon-valley-start-raises-millions-uav-risk-management-platform?utm_medium=email&utm_source=LNH+02-01-2018&utm_campaign=UAO+Latest+News+Headlines

Partners Develop Tiny Radar Sensor for Drone Collision Avoidance Betsy Lillian

January 30, 2018
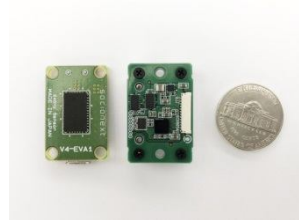
Aurora Flight Sciences, a Boeing Company, has collaborated with Socionext Inc., a provider of radar sensor technology, to develop a new collision-protection system for consumer drones.

The Radar Flight Control Module (RFCM) is made up of a single-chip 24GHz radar with range measurement software. The radar responds acutely to its surroundings and can detect multiple objects, objects in open spaces, target distance and speed, and more, the companies explain.

The RFCM provides distance, warning and braking signals to the flight controller through a simple interface, allowing for integration on a wide range of drone products. The RFCM acts to prevent head-on collisions with everyday obstacles in the drone's path, according to the companies. https://unmanned-aerial.com/partners-develop-tiny-radar-sensor-drone-collision-avoidance?utm_medium=email&utm_source=LNH+02-01-2018&utm_campaign=UAO+Latest+News+Headlines

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Airbus's drone taxi completes its first flight February 2, 2018 Audrey Zhang

Two years are all it takes for Airbus to turn its sci-fi concept to reality. Airbus drone taxi Vahana, dubbed Alpha One, reached a height of 5 meters (16 feet) and stayed in the air for 53 seconds before descending safely at 8:52 AM on January 31. Representatives from the FAA and the full Vahana team witnessed the first flight. Its first flight was fully self-piloted and the vehicle completed a second flight the following day.

According to Airbus, the goal of Vahana is to 'democratize personal flight by leveraging the latest technologies such as electric propulsion, energy storage, and machine vision.'

"We now have a better understanding of the performance of CityAirbus' innovative electric propulsion system, which we will continue to mature through rigorous testing while beginning the assembly of the full-scale CityAirbus flight demonstrator" says Marius Bebesel, CityAirbus chief engineer.

UAS and SmallSat Weekly News

Back to October 2017, Airbus confirmed its ambitious plan to create autonomous taxi, a single-passenger electric vertical-take-off-and-landing(VTOL) self-piloted vehicle. Undoubtedly, Vahana's successful maiden flight is a remarkable achievement for Airbus.

Airbus will continue its drone taxi project with MAGicALL, a California-based company which produces custom designed components including motors, generators, inductors,transformers,etc.

Not long after Volocopter's air taxi debut at CES 2018, flying taxi Vahana heated up the discussion of autonomous vehicle again. Building an autonomous passenger drone network might sound very ambitious. However, when you think about the starling pace of self-flying vehicles' development, it seems that a future of seeing drone taxis in our skies is not far. https://www.wetalkuav.com/airbuss-drone-taxi-completes-its-first-flight/2/