



## UAS and SmallSat Weekly News

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### Skyborg Could Develop Multiple Drones for Many Missions THERESA HITCHENS

February 04, 2021



WASHINGTON: The high-priority [Skyborg program](#) to develop low-cost, autonomous drones able to team with piloted aircraft could reach initial operating capability by **2023**, says AFRL Director Brig. Gen. Heather Pringle.

"I'm really excited about what Skyborg has accomplished and what we have in store," she told the Mitchell Institute today, noting that her Air Force Research Laboratory is partnering with the PEO for fighters and advanced weapons led by Brig. Gen. Dale White. "We're really excited about that December demo because it was a first-ever kind of opportunity to show an 'attritable' as a force multiplier with fifth-gen aircraft."

Pringle explained that [while the Dec. 9 test wasn't fully successful](#), it was incredibly useful from a research perspective. "We weren't able to establish it in flight with the onboard communication gateway, but we still achieved the objective because we had a backup on the ground. And so the connections were made; we still got the job done."

<https://breakingdefense.com/2021/02/skyborg-could-develop-multiple-drones-for-many-missions/>

### Air Force Swarming Drone Program to Take Next Step 2/4/2021 Meredith Roaten



Golden Horde — which is part of the service's Vanguard advanced technologies program — is envisioned as a collection of small networked expendable drones integrated by datalink radios and collaborative behaviors. In December, the Air Force Test Center dropped two small diameter bombs linked together from an F-16 fighter jet. The demonstration

achieved nine out of 13 objectives, but the bombs failed to hit their target says AFRL Director Brig. Gen. Heather Pringle.

The weapons system failed to accept an updated flight profile from the autonomous onboard processor, causing the system to maintain its flight pattern and miss the target. The upcoming tests will use four collaborative small diameter bombs in hopes of avoiding the mistakes of the previous demonstration. <https://www.nationaldefensemagazine.org/articles/2021/2/4/just-in-air-force-swarming-drone-program-to-take-next-step>



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### Role of medical drones in global Covid vaccine campaign is growing FEB 4, 2021

Riley de León@RILEYCNBC



Zipline, the California-based drone start-up that delivers critical medical supplies in countries like Ghana and Rwanda, is pursuing a larger role in the Covid-19 global vaccine effort and taking on one of the trickiest logistical challenges: cold-chain storage.

Earlier this week, Nigeria's Kaduna state [signed a deal with Zipline](#) allowing the drone delivery of [Covid-19](#) vaccines. Kaduna's partnership with Zipline, which delivered more than 1 million doses of other vaccines in Africa over the past year, will also enable on-demand delivery of blood products, medications and other vaccines.

Zipline is working on a plan to distribute Covid-19 vaccines with end-to-end cold chain capabilities. The ultra-cold temperatures required for storing the Covid-19 vaccine developed by U.S. pharmaceutical giant [Pfizer](#) and Germany-based [BioNTech](#) has not only driven [a buying frenzy for freezers](#) and dry ice, but also created logistical challenges for cash-strapped medical facilities that may not be able to afford such equipment.

"Cold chain distribution in pharma is complicated even in normal times," David Gitlin, president and CEO of Carrier Global Corp. [told CNBC in November](#). "The good news is public and private industry all coming together to be part of the solution through more capacity and new digital capabilities."

Zipline — which [ranked No. 7](#) on the 2020 [CNBC Disruptor 50](#) list — plans to leverage its drone delivery network for frozen and ultra-low temperature Covid-19 vaccines and medical products in [the markets where it operates](#), [starting this April](#). It declined to specify a vaccine partner. <https://www.cnbc.com/2021/02/04/role-of-medical-drones-in-global-covid-vaccine-campaign-is-growing.html>

### Space Force Eyes Satellite Imaging for Beyond-Line-Of-Sight Targeting Brenda Marie Rivers February 4, 2021 News, Technology, Wash100



[Gen. John Raymond](#), chief of space operations and [2021 Wash100 Award winner](#), said during a recent call with the Defense Writers Group that the Space Force seeks to closely coordinate with intelligence sector partners to explore the use of [tactical satellite imaging](#),

He noted that his office has begun efforts to assess potential design concepts

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for satellite-based BLOS targeting.

The use of satellite imagery for tactical applications traditionally falls under the intelligence community, specifically the National Geospatial-Intelligence Agency and National Reconnaissance Office. Previously, the U.S. [Air Force Research Laboratory](#) and the U.S. Navy earmarked funding for commercial GEOINT software and synthetic aperture radar technology.

"I do think as technology has allowed for **smaller satellites** to be more operationally relevant and you can do so at a price point that is cheaper, there is a role for operational level tactical satellites and the Space Force would have a role in that," noted Raymond.

<https://www.executivegov.com/2021/02/space-force-eyes-satellite-imaging-for-beyond-line-of-sight-targeting-gen-john-raymond-quoted/>

### **Latest DroneDeploy Funding Round Adds \$50 Million for Expansion** Miriam

McNabb February 04, 2021



A new round of [DroneDeploy](#) funding adds \$50 million to the company, bringing the total to date to **\$142 million**: which a company release says is **the most to date for any drone data company**. This latest Series E funding round is the result of DroneDeploy's explosive growth (they report a **259% annual growth** in enterprise use in 2020) and [impressive user base](#).

Founded in 2013, the company was described as a drone mapping platform – but it has rapidly expanded to include far more features and capabilities than "mapping" describes. It now offers solutions from data gathered from ground level cameras in addition to drones - and they've added layers of data analysis.

"We see two powerful tailwinds. Enterprise use of drones is exploding. Across the globe, the largest agriculture, logistics and energy companies are operating fleets of hundreds of drones, and they are using DroneDeploy to manage them. To support our thousands of European users, we are launching an EMEA office," said Mike Winn, CEO and co-founder of DroneDeploy. "At the same time, companies are digitizing their sites inside and out, creating full digital twins of their assets. We have expanded our drone technology with the ability to capture and analyze images from ground-based cameras operated by people or robots."

<https://dronelife.com/2021/02/04/latest-dronedeploy-funding-round-adds-50-million-for-expansion/>



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### Medical drone test flights in North Carolina, could be used to deliver COVID-19 vaccines 2021-02-05



CHARLOTTE, N.C. – A California based company is using drone test flights to transport and deliver medicine and vaccines in rural areas of North Carolina. The test flights are the first step towards having an all drone-based delivery system for vaccines, medicine and other hospital supplies.

The drones being used to deliver medicine aren't the ones you find at the hobby shop. Volansi, the California based drone provider, uses these larger drones which combine helicopter and plane like capabilities. The flights are mostly done without someone at the controls. The goal is to land and take off without the need for infrastructure.

Test flights started in October in Wilson, North Carolina by delivering medical supplies from manufacture directly to a hospital system. The quicker delivery is because the drones cut out the logistics middle man. Test flights took off just before the rollout of a COVID-19 vaccine.

"What was unique about that trial and the mission was we were doing very temperature-sensitive vaccines in a box that could maintain the temperature at -70 degrees Celsius," said Hannan Parvizia, co-founder and CEO of Volansi.

[https://www.uavexpertnews.com/2021/02/medical-drone-test-flights-start-in-north-carolina-could-be-used-to-deliver-covid-19-vaccines/?utm\\_source=Master&utm\\_campaign=a2ae366e1b-EMAIL\\_CAMPAIGN\\_2017\\_12\\_20\\_COPY\\_01&utm\\_medium=email&utm\\_term=0\\_35ad7bc94d-a2ae366e1b-89168288](https://www.uavexpertnews.com/2021/02/medical-drone-test-flights-start-in-north-carolina-could-be-used-to-deliver-covid-19-vaccines/?utm_source=Master&utm_campaign=a2ae366e1b-EMAIL_CAMPAIGN_2017_12_20_COPY_01&utm_medium=email&utm_term=0_35ad7bc94d-a2ae366e1b-89168288)

### Livestreaming drones for the future of site inspections 2021-02-03 Alexander Kolomietz



Telia and **Ericsson** ONE are rolling out the first livestreaming drone service in Sweden. Industrial site inspection could easily be conducted by deploying drones with video livestreaming capabilities, enabling remote drone pilots, decision-makers, and site technicians to all work simultaneously in concert for reduced response times, lowered operational costs and improved quality assurance overall.

From construction sites and quarries to railways and power grids, drone livestreaming will deliver real-time, high-quality video for better aerial inspections even on the most challenging sites, such as those with high structures or expansive areas. And perhaps one of its strongest



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benefits is the fact that deploying this specialized drone solution won't place new demands on companies looking to utilize it. The service itself is simple, pairing existing drones with a downloadable application and running them on a special controller connected to a typical LTE router. Letting users get started quickly and easily without any additional hardware, companies will be able to build the solution onto their existing mobile network infrastructure, effortlessly contributing to the growth of the promising drone industry.

[https://www.uavexpertnews.com/2021/02/livestreaming-drones-for-the-future-of-site-inspections/?utm\\_source=Master&utm\\_campaign=a2ae366e1b-EMAIL\\_CAMPAIGN\\_2017\\_12\\_20\\_COPY\\_01&utm\\_medium=email&utm\\_term=0\\_35ad7bc94d-a2ae366e1b-89168672](https://www.uavexpertnews.com/2021/02/livestreaming-drones-for-the-future-of-site-inspections/?utm_source=Master&utm_campaign=a2ae366e1b-EMAIL_CAMPAIGN_2017_12_20_COPY_01&utm_medium=email&utm_term=0_35ad7bc94d-a2ae366e1b-89168672)

### **Dedrone First to Offer Both United States and European Union Drone Remote ID Capability** 2021-02-03 UAV Expert News



SAN FRANCISCO, Feb. 2, 2021 /PRNewswire/ — [Dedrone](#) now enables their customers to leverage both U.S. and E.U. remote identification standards.

In December 2020, the US Federal Aviation Administration [announced final rules](#) for unmanned aircraft systems including a requirement for Remote ID. Additionally, the European Commission Regulations on UAS came into effect on December 30, 2020. Drone pilots in the U.S. and E.U. will be responsible for complying with regulations in their geography, including registering their aircraft and incorporating registration data into the drone's Remote ID system.

Security providers will be able to read Remote ID data through Dedrone's software system to identify the drone operator, operator's location, drone type and drone location in real time. DroneDNA automatically references Remote ID data as well as identifies any unauthorized or noncompliant drone activity. In the event of an unauthorized drone alert, users can respond to the threat and ensure their airspace is protected against the consequences of unwanted drones, from espionage, contraband delivery, or terrorism, while allowing authorized drones to proceed with their normal flight operations.

Dedrone's global footprint ensures that its customers will be able to leverage the latest regulations around the world. [https://www.uavexpertnews.com/2021/02/dedrone-first-to-offer-both-united-states-and-european-union-drone-remote-id-capability/?utm\\_source=Master&utm\\_campaign=a2ae366e1b-](https://www.uavexpertnews.com/2021/02/dedrone-first-to-offer-both-united-states-and-european-union-drone-remote-id-capability/?utm_source=Master&utm_campaign=a2ae366e1b-)





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[EMAIL\\_CAMPAIGN\\_2017\\_12\\_20\\_COPY\\_01&utm\\_medium=email&utm\\_term=0\\_35ad7bc94d-a2ae366e1b-89168288](mailto:EMAIL_CAMPAIGN_2017_12_20_COPY_01&utm_medium=email&utm_term=0_35ad7bc94d-a2ae366e1b-89168288)

### UK flies 20-drone swarm in major test February 5, 2021 News



The UK has flown a swarm of 20 drones of five different types, the largest evaluation of a military-focused Uncrewed Aerial Vehicles swarm in the UK to date. The test represents the culmination of work done by the UK Defence Science and Technology Laboratory's 'Many drones make light work' project.

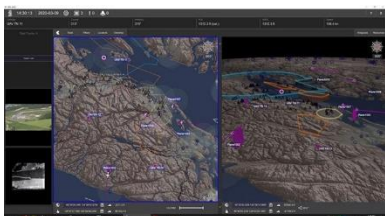
Funded under the Ministry of Defence's Science and Technology Portfolio through the Defence and Security Accelerator, the evaluation saw 220 sorties flown over two weeks from RAF Spadeadam, Cumbria.

The Dstl project technical authority said: "This is a significant step forward in our understanding of the capabilities of swarming drones and has been achieved through excellent collaboration across the MOD and with a number of Small and Medium Enterprise partners."

Following two earlier phases, a **£2.5m** contract was awarded to further develop the technology in 2019. Funding was awarded to a team led by Blue Bear Systems Research that includes Plextek DTS, IQHQ, Airbus and Durham University. The swarm saw **five different fixed-wing drones carrying six different payloads** fly representative missions **under the control of just three operators** using Blue Bear's Mobile Command & Control System.

The five UAVs used in the test were Blue Bear's Ghost, Ghost Modular, Red Kite, Cobra and the hand-launched Flat Pack system. [https://uasweekly.com/2021/02/05/uk-flies-20-drone-swarm-in-major-test/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=uk-flies-20-drone-swarm-in-major-test&utm\\_term=2021-02-05](https://uasweekly.com/2021/02/05/uk-flies-20-drone-swarm-in-major-test/?utm_source=rss&utm_medium=rss&utm_campaign=uk-flies-20-drone-swarm-in-major-test&utm_term=2021-02-05)

### Kongsberg Geospatial Improves BVLOS Drone Operations with a "Horizonless Air Picture" February 5, 2021News



Kongsberg Geospatial, developer of the TerraLens Geospatial SDK transponder, and Aireon, developers of a space-based ADS-B network announced that they will be demonstrating a horizonless air picture to help improve drone operations safety



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in an upcoming online seminar hosted by the Association for Unmanned Vehicle Systems International.

Kongsberg Geospatial, along with its partners Aireon and uAvionix, will demonstrate how a space-based ADS-B feed can be fused with an ADS-B local receiver to create **the world's first demonstration** of a "horizonless air picture" for BVLOS operations. This is important for long-range BVLOS missions where unmanned aircraft system operators need to be aware of air traffic and other unmanned systems – both in the mission area and over the horizon.

This combined sensor picture, integrated and correlated within the Kongsberg geospatial IRIS Airspace Management application, provides for the best of both ADS-B worlds: the local accuracy and update rate from the uAvionix PingStation ADS-B receiver combined with the worldwide coverage of the space-based Aireon ADS-B satellite receiver network.

This integrated and correlated airspace picture provides accurate local coverage while eliminating local blind spots caused by terrain or obstacles while providing an over-the-horizon capability to monitor your own or any other ADS-B emitting aircraft.

[https://uasweekly.com/2021/02/05/kongsberg-geospatial-improves-bvlos-drone-operations-safety-with-a-horizonless-air-picture/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=kongsberg-geospatial-improves-bvlos-drone-operations-safety-with-a-horizonless-air-picture&utm\\_term=2021-02-05](https://uasweekly.com/2021/02/05/kongsberg-geospatial-improves-bvlos-drone-operations-safety-with-a-horizonless-air-picture/?utm_source=rss&utm_medium=rss&utm_campaign=kongsberg-geospatial-improves-bvlos-drone-operations-safety-with-a-horizonless-air-picture&utm_term=2021-02-05)

**WSU receives funding to improve unmanned aerial systems** Informer staff  
news@derbyinformer.com Jan 28, 2021



Wichita State University will receive \$684,000 from the Federal Aviation Administration for three programs aimed at increasing safety measures for the use of unmanned aerial systems.

The awards are for fiscal year 2021 and include \$464,000 to lead Small UAS Mid-Air Collision Likelihood studies, \$120,000 to support the Validation of Visual Operation Standards and \$100,000 to support High-Bypass UAS Engine Ingestion Tests. They will be conducted through the National Institute for Aviation Research.

Wichita State is part of the FAA's Air Transportation Center of Excellence for Unmanned Aircraft Systems also known as the Alliance for System Safety of UAS through Research Excellence (ASSURE).

In total, the FAA awarded **\$5.8 million** in research, education and training grants to universities engaged with ASSURE, including Embry Riddle Aeronautical University, Kansas State University, New Mexico State





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University, North Carolina State University, Oregon State University, Ohio State University, University of Alabama, University of Alaska, University of Kansas and University of North Dakota.

"These universities are making great strides in advancing the Department's efforts to integrate UAS safely and efficiently into our Nation's airspace system, ultimately delivering new transportation solutions and economic benefits for the American people," said acting U.S. Secretary of Transportation Steven G. Bradbury. [http://www.derbyinformer.com/news/area\\_news/wsu-receives-funding-to-improve-unmanned-aerial-systems/article\\_8cc09e04-5ffa-11eb-ae0d-977bd610e56b.html](http://www.derbyinformer.com/news/area_news/wsu-receives-funding-to-improve-unmanned-aerial-systems/article_8cc09e04-5ffa-11eb-ae0d-977bd610e56b.html)

### FAA Approves Fully Automated Commercial Drone Flights February 2, 2021



On January 14, the Federal Aviation Administration approved the first fully automated commercial drone flights by [granting](#) Massachusetts-based American Robotics, Inc. permission to operate drones without hands-on piloting and "beyond-visual-line-of-site" through January 31, 2023.

Weighing less than 20 pounds, American Robotics' Scout drones use acoustic technology to detect and avoid other airborne obstacles. The part 107 waiver permits American Robotics to operate its drones along preset routes following issuance of a notice to airmen identifying location, altitude, operational area, and nature and time of activity. In addition, the waiver requires that these preset routes be flown in rural areas and below 400 feet. The Scout drones will be initially used for agricultural purposes in Kansas, Massachusetts, and Nevada in part to assist farmers track crop growth through real-time imagery without substantial human involvement. <https://www.jdsupra.com/legalnews/faa-approves-fully-automated-commercial-4067822/>

### Flirtey, Vault Health complete COVID-19 test kit deliveries by drone Josh Spires Feb. 5, 2021



Last November, the two companies [announced a partnership](#) that has seen drones delivering COVID-19 test kits to residents not wanting to leave the house in Reno, Nevada. Yesterday, the company announced it has successfully delivered these test kits by drone.

Flirtey's Eagle drone delivered the test kits. The Flirtey Eagle has been designed to fly in 95% of weather conditions and fit 75% of its compartment packages. It uses a tether to lower the package at the drop-off location.



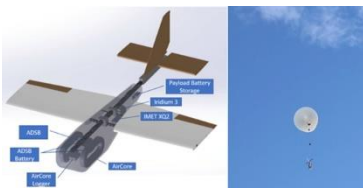
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The Eagle is flown using a custom-made autonomous software platform that the FAA has given the go-ahead as the **first multi-drone delivery system to be approved in the US**. Flirtey Portal is the company's portable drone launch station. It can go into a trailer and fit into a parking spot.

Once the drone dropped off the test kits, they would join a video call with a health professional to ensure the test was taken correctly. The test was then given 48 to 72 hours to come up with a result, at which time you hop back on a call to discuss the result. The test can be purchased from the company's website and provides an answer within 48 to 72 hours for \$119.

<https://dronedj.com/2021/02/05/flirtey-vault-complete-covid-19-test-kit-deliveries-by-drone/#more-49070>

**NOAA gears up to test its new greenhouse gas sampling drone** [Josh Spires](#) Feb. 5, 2021



NOAA has been using a weather balloon system to collect high-altitude greenhouse gas samples for some time. An issue with this is that the sample must be picked up within a short amount of time, limiting the areas that can be tested.

NOAA has been working with the Uncrewed Systems Research Transition Office and Arizona State University for the last two years to [develop a method](#) to solve this problem. This method is the new High-altitude Operational Return Unmanned System (HORUS).

The HORUS also uses a balloon to send it to the correct altitude. Once the gas sample has been collected, the balloon pops, and the drone glides its way back down to the recovery location. This allows the greenhouse gases to be sampled from various locations and essentially fly back within a small timeframe.

The drone is now in its final testing phase before going mainstream. It must undergo various test flights following different patterns below 10,000 feet before making its way to high-altitude testing at **95,000 feet**. <https://dronedj.com/2021/02/05/noaa-gears-up-to-test-its-new-greenhouse-gas-sampling-drone/#more-49114>



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### Draganfly's COVID-19 Vaccine Delivery Solution Miriam McNabb February 05, 2021



By DRONELIFE Staff Contributor Jim Magill

Draganfly, the Raleigh, North Carolina-based company, is developing an unmanned aerial system to deliver vaccines to hard-to-reach places such as offshore oil rigs.

In December, Draganfly Inc. [announced](#) it had been selected by Spring Branch, Texas-based Coldchain Technology Services, a leading healthcare supply chain management company, "to immediately develop and provide flight services of a robust vaccine-delivery payload for use in critical regions for drone delivery of the COVID-19 vaccine." Coldchain, one of the largest vaccine distributors in the United States, has contracts to deliver vaccines in 15 states, and is the exclusive COVID vaccine distributor for the state of Texas.

Draganfly is developing a payload container, equipped with a sustainable thermal-management system with the capability to carry a minimum of 300 multi-doses or 100 single doses of the vaccine. The payload will comprise a crucial part of a delivery and logistics platform that Draganfly will operate. <https://dronelife.com/2021/02/05/draganflys-covid-19-vaccine-delivery-solution/>

### New Drones and Remote ID: Who Cares? You do – DRONELIFE Minute Survey

Harry McNabb February 05, 2021



When the [FAA released](#) the [Remote ID rule](#) late last year, it left the drone industry with as many questions as answers. What about new hardware and remote ID solutions? How will manufacturers comply? Will drone owners be able to receive a simple firmware update? Will the solution require a hardware solution or significant change? What if the UAS I buy today can't be upgraded?

The DRONELIFE Minute Survey is a way to share some of the prevailing buzz that comes our way from readers on a variety of subjects and for us to track changes over time on topics that we feel would be of interest to our readers and the industry.

We asked our social media followers one simple question: Are you holding off on drone purchases until you see a remote ID solution?



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The answers are split pretty close to 50/50 – indicating that while the release of a Remote ID rule hasn't frozen drone purchases, it may have slowed them down.

<https://dronelife.com/2021/02/05/new-drones-and-remote-id-who-cares-you-do-dronelife-minute-survey/>

### GET READY: 2021 IS SET TO BE A MUCH BIGGER YEAR FOR DRONES THAN

**2020** February 8, 2021 Sally French The Drone Girl News



2021 is set to be a big year for the drone industry, and it's in large part due to the bricks that were laid for the drone industry in light of coronavirus. At least, that's according to these DroneDeploy 2021 predictions.

Drone software company DroneDeploy [surveyed](#) more than 600 users across 20 industries spanning over 40 countries to find out how companies are approaching 2021. **88%** of respondents said they expect to **increase or maintain their spend** on drone operations in 2021. More specifically, 53% of respondents said they intend to increase spending, vs. maintain.

"Even with all of the cost-cutting amidst the pandemic, companies are still willing to invest in drone technology," according to the [DroneDeploy State of the Drone Industry Report 2021](#).

"This data also suggests where drone technology had previously been perhaps a luxury for many companies, more and more industries are now embracing it as a necessity."

<https://www.thedronegirl.com/2021/02/08/dronedeploy-2021-predictions/>

### NASA awards \$8 million to Austin team for autonomous cargo transport

**research** February 8, 2021 Jenny Beechener UAS traffic management news



Researchers at UT Austin's Oden Institute for Computational Engineering and Sciences and the Department of Aerospace Engineering and Engineering Mechanics in the Cockrell School of Engineering are leading a team that will develop methods that could be used to **validate the cost and scalability of conceptual autonomous cargo operations**. They will be providing theory and concepts for all types of vehicles — from large, unmanned cargo aircraft crossing the US to the single drone that can drop a package in residential neighborhoods.



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The researchers will rely on machine learning and computational engineering to find solutions to the long list of challenges they face from the management of autonomous aircraft traffic flow to regulations, public concerns about safety, privacy, emissions and noise pollution.

The team includes experts from Purdue University, the Massachusetts Institute of Technology, MIT Lincoln Labs, Morgan State University and an industry partner, Cavan Solutions, in a NASA University Leadership Initiative. The team will use a method that **transforms societal concerns** — from environmental, to safety and risk — **into terrain or surfaces**. “You can create a hill for each noise-sensitive area like a school or church,” said John-Paul Clarke, a professor in the Cockrell School of Engineering and co-principal investigator on the study. “We can then modify the flight trajectory of an aerial vehicle to ensure it remains above the resulting terrain and ensure the noise level at all locations stays below the threshold used to create the surface.”  
<https://www.unmannedairspace.info/latest-news-and-information/nasa-awards-usd8-million-to-university-of-texas-for-autonomous-cargo-transportation-research/>

## Drones That Hunt Hurricanes – NOAA Puts Some to the Test 2021-02-08 UAV Expert News



| In clear skies over Maryland the week of January 11, NOAA scientists launched a new uncrewed small aircraft — a research drone — from a NOAA Hurricane Hunter plane to test its ability to gather weather data that could improve hurricane forecasts.

“We’re hopeful this new technology, once it can be successfully tested in a hurricane environment, will improve our understanding of the boundary layer and advance NOAA forecast models used in forecasts,” said Joseph Cione, lead meteorologist at NOAA’s Atlantic Oceanographic and Meteorological Laboratory Hurricane Research Division. “Ultimately, these new observations could help emergency managers make informed decisions on evacuations before tropical cyclones make landfall.”

For many years, NOAA Corps pilots have flown the agency’s two [WP-3D Orion Hurricane Hunters](#) into the eye of tropical storms and release sensors tethered to parachutes recording wind speed and direction, temperature, moisture and pressure. Now it appears scientists might soon get a better view.

“Dropsondes give us ‘snapshots’ of weather conditions, while the continuous flow of data collected by uncrewed aircraft provide something closer to a movie,” said Cione, who conducted the drone test missions out of Patuxent River Naval Air Station. “Deploying the



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uncrewed aircraft from NOAA Hurricane Hunters will ultimately help us better detect changes in hurricane intensity and overall structure.” [https://www.uavexpertnews.com/2021/02/drones-that-hunt-hurricanes-noaa-puts-some-to-the-test/?utm\\_source=Master&utm\\_campaign=e2b02b2414-EMAIL\\_CAMPAIGN\\_2017\\_12\\_20\\_COPY\\_01&utm\\_medium=email&utm\\_term=0\\_35ad7bc94d-e2b02b2414-89168672](https://www.uavexpertnews.com/2021/02/drones-that-hunt-hurricanes-noaa-puts-some-to-the-test/?utm_source=Master&utm_campaign=e2b02b2414-EMAIL_CAMPAIGN_2017_12_20_COPY_01&utm_medium=email&utm_term=0_35ad7bc94d-e2b02b2414-89168672)

### DRONE REGULATION OVERHAULS PUBLISHED 2021-02-08 UAV Expert News



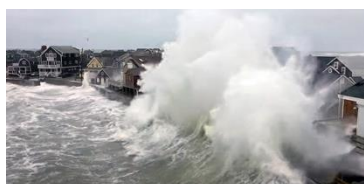
Publication of a new federal aviation regulation, [Part 89](#), and the concurrent, closely related [overhaul of Part 107](#) on January 15 started the clock on major changes to the limits placed on nearly all unmanned aircraft.

Years in the making, this first major overhaul of regulations will apply those rules to virtually every such aircraft, including drones flown for recreation rather than profit and traditional radio-controlled model aircraft. By the autumn of 2023, drones unable to broadcast what the FAA often describes as a “digital license plate” will be restricted to flying only in approved areas. The advent of remote identification has long been a prerequisite for scaling up package delivery and other missions that have fascinated media and the public, as well as less glamorous missions such as infrastructure inspection. Law enforcement has been pressing for this requirement for years, seeking a tool that can help identify bad actors.

The FAA, in a December 28 [news release](#) announcing the final language of two closely related rulemaking efforts, called these much-anticipated rules a “major step toward the full integration of drones into the national airspace system.”

[https://www.uavexpertnews.com/2021/02/drone-regulation-overhauls-published/?utm\\_source=Master&utm\\_campaign=e2b02b2414-EMAIL\\_CAMPAIGN\\_2017\\_12\\_20\\_COPY\\_01&utm\\_medium=email&utm\\_term=0\\_35ad7bc94d-e2b02b2414-89168288](https://www.uavexpertnews.com/2021/02/drone-regulation-overhauls-published/?utm_source=Master&utm_campaign=e2b02b2414-EMAIL_CAMPAIGN_2017_12_20_COPY_01&utm_medium=email&utm_term=0_35ad7bc94d-e2b02b2414-89168288)

### Storm chasers capture terrifying storm with Mavic 2 Pro David MacQuarrie Feb. 8, 2021



If there were a Ten Commandments for drones, thou shalt not fly in winds and thou shalt not fly in rains would be near the top. But unless someone transgressed, we’d never have these pictures of a nor’easter smashing the Atlantic coast. Storm chasers captured the terrifying storm with a DJI Mavic 2 Pro.





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Live Storms Media owner and meteorologist Brett Adair told us in an email that he chases storms across the US and even internationally. The weather brought his photographer, Brandon Clement, to Scituate just southeast of Boston. He found the ocean threatening to wash away homes along the town's peninsula.

The weather office expected 50 mph winds along the coast. And yet there's some nice smooth camera work there, and the drone doesn't seem the least bothered or buffeted. See the movie: <https://dronedj.com/2021/02/08/storm-chasers-capture-terrifying-storm-with-mavic-2-pro/#more-49268>

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### C-ASTRAL Provides C4ISR Capabilities for VTOL Cargo UAV 03 Feb 2021 Mike Ball



[C-ASTRAL Aerospace](#) has been selected to provide C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance) capabilities for the upgraded version of Pipistrel's [NUUVA V20 hybrid-electric VTOL cargo UAV](#).

Based on initial customer feedback, Pipistrel decided to relaunch the aircraft with added capabilities. Initially designed to deliver cargo such as spare parts and medical supplies, the NUUVA V20 is being **enhanced** with an array of payloads, sensors and data link options for achieving situational awareness, providing customers with greater versatility.

C-ASTRAL Aerospace was selected due to its experience with UAS integration and R&D and will upgrade the system with proven C4ISR solutions, intuitive ground station elements and support suites. [https://www.unmannedsystemstechnology.com/2021/02/c-astral-provides-c4isr-capabilities-for-vtol-cargo-uav/?utm\\_source=UST+eBrief&utm\\_campaign=7ae1f0885e-eBrief\\_2021\\_9Feb&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-7ae1f0885e-119747501](https://www.unmannedsystemstechnology.com/2021/02/c-astral-provides-c4isr-capabilities-for-vtol-cargo-uav/?utm_source=UST+eBrief&utm_campaign=7ae1f0885e-eBrief_2021_9Feb&utm_medium=email&utm_term=0_6fc3c01e8d-7ae1f0885e-119747501)

### Air Force Research Lab to Test Multiple Skyborg Prototypes This Year Frank

Wolfe February 8, 2021



*A U.S. Air Force F-22 Raptor and F-35A Lightning II fly in formation with the XQ-58A Valkyrie low-cost unmanned aerial vehicle over the U.S. Army Yuma Proving Ground testing range, Ariz., during a series of tests Dec. 9, 2020.*

Air Force Research Laboratory Commander Brig. Gen. Heather Pringle and Air Force program executive officer for aircraft and advanced weapons Brig. Gen.



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Dale White are leading an effort this year to test multiple prototypes for Skyborg, one of three Air Force Vanguard programs intended to field advanced capabilities rapidly.

The tests will follow a demonstration on Dec. 9 in which a Skyborg XQ-58A Valkyrie attritable by Kratos flew in formation over U.S. Army Yuma Proving Ground, Ariz., with a Lockheed Martin F-22 and an F-35 fighter and served as a gatewayONE communications translator between the two fighters.



*In December, the XQ-58A Valkyrie performed a series of successful test flights at Yuma Proving Ground in Arizona and involved an F-22 Raptor, F-35A Lightning II, and an attritable ONE XQ-58A Valkyrie.*

The December demonstration, in which the Valkyrie flew in formation with the F-22 and F-35, was “the **first ever** opportunity to show an attritable as a force multiplier with two fifth gen aircraft,” Pringle said.

<https://www.aviationtoday.com/2021/02/08/air-force-research-lab-test-multiple-skyborg-prototypes-year/>

## Florida Agencies Sign with DroneUp for Services Amy Wiegand

757-657-4886



**Virginia Beach, VA (February 9, 2021)** -- DroneUp, LLC and the State of Florida have signed a Participating Addendum for the NASPO ValuePoint contract for Unmanned Aerial Vehicle services. This begins the purchase of drone solutions for all state agencies, commissions, political subdivisions, institutions and local public bodies allowed by law. The award is the **first of its kind** for the drone industry and a highly anticipated announcement.

DroneUp, a leading drone services provider, was awarded a Master Agreement by the Commonwealth of Virginia in August 2019. The services are available for use by all 50 states, the District of Columbia and the territories of the United States through the National Association of State Procurement Officials. The State of Florida is now able to use the award for the benefit of state departments, institutions, agencies and political subdivisions. For further information: <https://www.naspovaluepoint.org/portfolio/unmanned-aerial-vehicle-drone-services-2019-2024/droneup-llc/>



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### Terrafugia's Road and Air Vehicle Gets FAA Airworthiness Certificate Miriam

McNabbon: February 09, 2021



Terraugia's Transition® "Roadable Aircraft" has received an FAA special light-sport airworthiness certificate, one more step towards getting the **ultimate hybrid vehicle** into the hands of consumers. Check out the video below to see what the Transition® looks like up close – with foldable wings that allow it to fit in your regular garage.



Terraugia's fascinating solution to transportation is an integrated 2-seater aircraft and automobile. "Transition® is designed to meet safety standards from both the Federal Aviation Administration and the National Highway and Traffic Safety Administration." The FAA has granted the aircraft portion of the vehicle an airworthiness certificate.

With the goal of being legal both in the sky and on local roads in 2022."

It's a fascinating solution to urban mobility challenges. While certification of unmanned passenger aircraft may be a challenge in the U.S., the Transition hybrid is a step forward for urban air mobility – opening people's minds to new modes of transport and traveling through the air for short, daily trips.

<https://dronelife.com/2021/02/09/terrafugias-road-and-air-vehicle-gets-faa-airworthiness-certificate-the-ultimate-hybrid-for-urban-air-mobility/>

### Thales Alenia selected to build Telesat's broadband constellation Sandra

Erwin February 9, 2021



WASHINGTON — Canadian satellite operator [Telesat](#) announced Feb. 9 it has selected Thales Alenia Space to manufacture **298** satellites for a broadband network in low-Earth orbit. Its constellation, named Lightspeed, will start offering services in 2023.

The selection of the European manufacturer caps a [years-long evaluation](#) of competing providers.

Dan Goldberg, president and CEO of Telesat, told *SpaceNews* that Thales Alenia Space was selected for its satellite design but also for its engineering and ground services. The **\$3 billion** deal is for the production of 298 satellites, network management software and for the



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integration of the satellites with gateways to be deployed around the world. The entire investment projected for Lightspeed is **\$5 billion**. <https://spacenews.com/thales-alenia-selected-to-build-telesats-broadband-constellation/>

### **PrecisionHawk, American Tower improve cell tower inspections** Josh Spires Feb. 10, 2021



[PrecisionHawk](#) has announced a multiyear alliance with American Tower to make cell tower inspections safer and more efficient. PrecisionHawk will hand over its AI-backed cell tower inspection software to American Tower to use on upcoming inspections. [The new software](#) will allow American

Tower to use drones for its inspections in a much safer, more efficient and accurate way to enable proactive maintenance, inventory reconciliation and precise servicing.

More than **41,000** wireless communications **tower facilities** across the **United States** will have drones flying above to complete inspections over the next few years. If all goes well, American Tower will likely expand the drone inspections to more than **183,000 sites worldwide**.

PrecisionHawk software allows users to overview all their assets overlaid onto a map with each one being clickable to show its ID, name, status and, most importantly, images from previous inspections.

In 2018 American Tower chose PrecisionHawk to be a key part of its move into the digital space for cell tower inspections. Since then, the two have completed thousands of inspections together, with PrecisionHawk taking the data away to build a tailor-made platform to improve the way inspections are completed. <https://dronedj.com/2021/02/10/precisionhawk-american-tower-improve-cell-tower-inspections/>

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### **United Airlines to Buy 200 Flying Electric Taxis to Take You to the Airport** Alison Sider Feb. 10, 2021



[United Airlines Holdings](#) Inc. said Wednesday it plans to buy up to **200 flying taxis** from an electric aircraft startup, as the airline industry seeks new technologies to [reduce its carbon footprint](#). The purchase would be worth \$1 billion, according to Archer, the Palo Alto, Calif.-based company developing the air taxis. The tentative

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agreement is a stamp of approval for Archer, which said Wednesday that it will go public through a combination with a special-purpose acquisition company in a deal that values the combined company at about **\$3.8 billion**. Archer aims to begin production in 2023 and launch consumer flights the following year.

United and [Mesa Air Group](#) Inc., [MESA 28.90%](#) a regional carrier that is joining with United on the purchase, said they envision using the taxis to whisk passengers over congested highways to hub airports. The taxis, which Archer said will be capable of flying 60 miles at 150 miles an hour, could nearly halve carbon dioxide emissions for passengers traveling from Hollywood to Los Angeles International Airport, United said.

United said that it would help speed the aircraft's development through a strategic partnership, but the taxis must get regulatory approval and meet the airline's operating and business requirements before a purchase is completed. United and Mesa have the option to buy another **\$500 million** worth of aircraft under the deal. [https://www.wsj.com/articles/united-airlines-invests-in-electric-air-taxis-11612981954?mod=business\\_minor\\_pos9](https://www.wsj.com/articles/united-airlines-invests-in-electric-air-taxis-11612981954?mod=business_minor_pos9)

**12Feb21**

### **Iris Automation selected to join World Economic Forum and drive mobility**

HEADLINE NEWS JOE PESKETT FEBRUARY 10, 2021



Iris Automation has been invited to join the World Economic Forum's Global Innovators community, an invitation-only group of the world's most promising start-ups and scale-ups that are at the forefront of ethical technological and business model innovation.

Companies who are invited to become Global Innovators will engage with one or more of the Forum's Platforms, as relevant, to help define the global agenda on key issues. Iris Automation has joined the **Shaping the Future of Mobility** platform.

Iris Automation is involved in the development of advanced detection systems used to help provide Detect-and-Avoid capabilities that enable safe commercial operations including Beyond Visual Line of Sight missions.

As part of the platform, Iris Automation plans to support compatible projects adopted by the Drone Innovators Network, and partner with DIN to advance progressive air safety policy. <https://www.commercialdroneprofessional.com/iris-automation-selected-to-join-world-economic-forum-and-drive-mobility/>



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### Vincent van Gogh drone show lasted for 26 minutes, breaking the world record

Josh Spires - Feb. 11, 2021



[A recent drone show](#) depicting the life of Dutch painter Vincent van Gogh has broken a world record for **the longest drone show**, lasting for over 26 minutes. The 600-strong drone show was done by China's EFYI Group, with Tianjin University's help.

[During the show](#), the drones created Van Gogh's name, images of him and some of his most famous paintings. The 26-minute-and-19-second-long drone show were sped up by 365% to bring it down to under eight minutes.

The drone show took place during -8°C or 17.6°F, creating a more challenging environment for the drones and their batteries. The show included the painter's most famous works, including *The Starry Night*, pictures of his *Sunflowers* series, *The Mulberry Tree in Autumn*, and *Self-Portrait with a Straw Hat*.

Having a drone show that can last almost 30 minutes is an impressive feat and shows that drones are now able to keep up with some of the longer fireworks shows. Up until now, many drone shows lasted under 10 minutes, making them an add-on to fireworks shows or their own smaller shows.

Be sure to have a **watch of the full video** below and see if you can recognize some of Van Gogh's paintings. <https://dronedj.com/2021/02/11/vincent-van-gogh-drone-show-lasting-for-26-minutes-breaking-the-world-record/#more-49600>