UAS and SmallSat Weekly News

Contents

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Hybrid Drones Open New Opportunities for Farmers July 23, 2020 Featured Articles

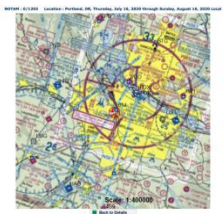
Drone spraying has been widely used in Southeast Asian countries such as China and Japan with great results. Now the trend is spreading to the US and Europe as well.

With +1 hour of flight time carrying 10L of liquid, HYBRiX aerial system is an innovation that makes it easier to work in a much more efficient way. A few weeks ago due to the heavy rain, the entry of ground vehicles to the field was impossible, but thanks to HYBRiX technology farmers were able to spray all their vid fields in one day of work.

The product application is different from ground-based machines, helicopters or crop dusters. HYBRiX drone is mainly flown 2 – 10 meters above the crop with its 4 rotors creating a specific turbulence in the air that helps distribute the liquid uniformly. The 4 nozzles are positioned in such a way that they allow an excellent coverage of the applied products, reaching hidden layers of the crop. HYBRiX is equipped with a 10 L liquid tank with a spray width up to 6 meters.

It is still too soon to come to a conclusion on the potential of drone spraying at large scale, but they are already showing unique advantages over manned aircraft and ground spraying equipment. https://uasweekly.com/2020/07/23/hybrid-drones-open-new-opportunities-for-farmers/?utm_source=rss&utm_medium=rss&utm_campaign=hybrid-drones-open-new-opportunities-for-farmers&utm_term=2020-07-24

Federal government bans drone flights during Portland protests Scott Simmie Jul. 24th 2020



The Federal Government has temporarily banned drones from flying over parts of Portland where ongoing protests show no signs of abating. If you violate the rules – your drone could be seized and even destroyed.

At the best of times, you'd be ill-advised to fly a drone above the middle of a city. You'd need a Part 107 Certification and likely a special waiver for the flight, especially if there are people below. Now, reports Reuters, the Department of Homeland Security has issued a notice banning drones from flying over buildings. A spokesman said they might be used to spy on federal officers who may be monitoring the situation from rooftops.

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As a result of the request, the Federal Aviation Administration has temporarily banned certain drone flights. Specifically, flights that take place below 1000' and within one nautical mile of the US Federal Courthouse and the Edith Green-Wendell Wyatt Federal Building are banned. Much of the protest activity has taken place near both of those locations. https://dronedj.com/2020/07/24/federal-government-bans-drone-flights-during-portland-protests/

US Air Force hands out $1 million contract for security drones Josh Spires Jul. 24th 2020

The US Air Force has awarded Asylon a $1 million contract as a part of the AFWERX Phase 2 Small Business Innovation Research to modernize its current drone system.

As a part of the contract, Asylon will be required to improve its DroneCore system to meet the US Air Force's standards. The DroneCore system includes a drone and a drone box to allow for autonomous operations and will be used to support security forces. The system has a flight time of 25 minutes and is able to fly in most weather conditions. The drone also has a parachute and can be equipped with two thermal imaging cameras. The drone weighs a total of 9 pounds and has forward-facing obstacle avoidance capable of detecting objects up to 196 feet away. To keep the data recorded and secure, the drone uses an encrypted datalink with a range of more than 1.8 miles.

The drone box allows the drone to autonomously land and get back in the air within three minutes, thanks to a custom designed battery swapping system built in. The drone box is also weather resistant like the drone and allows for users to connect to it via a 4G or Wi-Fi connection. https://dronedj.com/2020/07/24/us-air-force-hands-out-1-million-contract-for-security-drones/

Greece to produce custom swarm drones for warfare Josh Spires Jul. 24th 2020

The University of Thessaloniki in Greece will take part in a program to build the county's own custom swarm-capable drones as a part of Project Lotus. The drones will predominantly be used in surveillance and intelligence missions.

Project Lotus is being coordinated by Greek defense company Intracom Defense and will include other Greek companies as well as Cypriot, Spanish, and Dutch companies. The drone will be constructed with over 80% Greek parts.

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Kyriakos Yakinthos, professor of the Department of Mechanical Engineering, said there will be two types of drones produced, the larger mothership drone which will store and deploy the smaller drones which will do the swarming. Greece will use the drones for surveillance missions and humanitarian missions and will eventually be for sale for third parties and other countries.

While most think of drone swarms and drones that blow themselves up upon impact when it comes to the army, we have actually been using them in the entertainment business for the last few years in the form of light shows. These friendly drone swarms have lit up the Super Bowl, *Britain's Got Talent* and have even thanked the frontline workers in the COVID-19 pandemic. https://dronedj.com/2020/07/24/greece-to-produce-custom-swarm-drones-for-warfare/#more-32662

Drone Delivery Canada nets over $9m in new bought deal BUSINESS DELIVERY FINANCIAL SAM LEWIS JULY 24, 2020

It announced it had entered into an agreement with Echelon Wealth Partners and Canaccord Genuity as co-lead underwriters on behalf of a syndicate of underwriters. The underwriters initially agreed to purchase, on a bought deal basis, 7,143,000 units of the company for gross proceeds of approximately $5 million.

Only the next day, however, DDC provided an update, in which it revealed that the deal had been amended, meaning an increase from approximately $5 million to $8.05 million. Furthermore, it includes an over-allotment option which, if fully exercised, increases the size of the bought deal to $9.25 million. The offering is expected to close on or around 5 August, 2020.

The company intends to use the net proceeds from the offering to further develop its international prospects, to proportionally scale staffing as may be required, for the development of new projects and for working capital and general corporate purposes. https://www.commercialdroneprofessional.com/drone-delivery-canada-nets-over-6m-in-new-bought-deal/

Percepto Drone-in-a-Box passes level 5 hurricane testing APPLICATION EMERGENCY SERVICES HEADLINE NEWS ALEX DOUGLAS JULY 20, 2020

The box can withstand winds of up to 155mph making it the most rugged AI drone-in-a-box on the market for all weather conditions. The drone platform is also able to land in high winds and snow.

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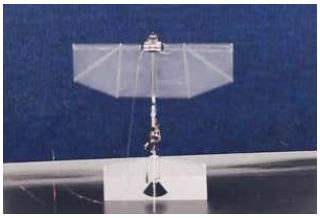
Commenting on the development, Michael Dorr, lead pilot at Florida Power and Light's drone in a box system, said: "As soon as the storm passes, we can have this up…inspecting our plant and knowing immediately what sort of damage we have so we're able to get our power back on that much sooner… for a utility to be able to see our infrastructure in areas where we can't get to safely; to quickly fly over it and understand what our conditions are…the safety of our crews is paramount."

FPL's goal is to eventually put a drone-in-a-box at every substation, transmission yard, plant and solar facility, according to Eric Schwartz, manager of the firm's aerial intelligence response. He said: "We can fly every single day and use image recognition to be able to identify a potential issue and reduce the number of outages to our customers."
https://www.commercialdroneprofessional.com/percepto-drone-in-a-box-passes-level-5-hurricane-testing/

Flapping drone can fly, dart and hover like a bird TECHNOLOGY 22 July 2020 Jason Arunn Murugesu



The drone consists of a motor and a battery attached to a set of X-shaped wings made from polyurethane film and carbon fiber (see video, below). It also has rear stabilizing fins made from expanded polystyrene.

Yao-Wei Chin at Nanyang Technological University in Singapore and his colleagues designed the drone to overcome many of the problems faced by previous robots with flapping wings. "Being able to hover and make quick turns requires excess thrust," says Chin. "Our prototype has an excess thrust of about 40 per cent of its body weight which allows it to climb fast." Its wings have nylon hinges, which minimize wobbling and help recover kinetic energy lost during flapping.

The robot weighs just 27.5 grams and can fly at speeds of up to 8 metres per second. It lasts up to 8 minutes in the air on a single battery charge.

Chin says the drone is safer than those with rotary wings. "Its wings are slow and flexible and so do not risk cutting people," he says. "Flapping drones may be more tolerant to crashes, like how a fly bounces off the window in a way that a quadcopter cannot, and have better stability in gusty conditions," says Richard Bomphrey at the Royal Veterinary College in London. Read more: https://www.newscientist.com/article/2249612-flapping-drone-can-fly-dart-and-hover-like-a-bird/#ixzz6TDZtQpBO

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Workhorse celebrates order for 20 of its delivery vehicles APPLICATION DELIVERY SAM LEWIS JULY 24, 2020

Cincinnati-based eTrucks plans to function as a vehicle buyer and reseller and will be offering fleet funding programs and services tailored for different business needs.

Workhorse is a technology company focused on providing drone-integrated electric vehicles to the last-mile delivery sector. It designs and builds battery-electric vehicles including trucks and aircraft.

Workhorse also develops cloud-based, real-time telematics performance monitoring systems that are fully integrated with its vehicles and enable fleet operators to optimize energy and route efficiency. Workhorse vehicles are designed to make the movement of people and goods more efficient and less harmful to the environment.
https://www.commercialdroneprofessional.com/workhorse-celebrates-order-for-20-of-its-delivery-vehicles/

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AiRXOS Launches Public Safety UAS Solution July 24, 2020

BOSTON--AiRXOS, a provider of Unmanned Traffic Management solutions, today announced the commercial availability of a new solution for Public Safety agencies. The Public Safety UAS Solution provides a comprehensive, single source platform with safety and operational tools and services built-in, allowing agencies to fly quickly with full Situational Awareness of manned and unmanned operations.

“Emergency response remote pilots can’t afford to waste time toggling between multiple software applications when lives are on the line. They need a reliable, one-stop solution that can handle the mission at hand.”

The solution provides customers simplified processes, practical operational tools and operational oversight in one centralized solution, from digitizing agency workflows – streamlining compliance and flight authorization processes – to providing airspace advisories, video streaming, and full Situational Awareness. The Public Safety UAS solution, available as both a mobile application and web-based solution, helps eliminate the need for multiple applications and labor-intensive flight authorizations as well as improves airspace visibility and

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compliance tracking. https://www.businesswire.com/news/home/20200724005417/en/AiRXOS-Launches-Public-Safety-UAS-Solution-Platform

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U.S. Relaxes Rules on Sales of Armed Drones 27 JUL 2020 BUSINESS COURTNEY MCBRIDE

A U.S. Air Force MQ-9 Reaper drone

The Trump administration has relaxed export restrictions on specific types of unmanned aerial systems, enabling U.S. defense contractors to sell more of their wares abroad. The policy change will allow the transfer of armed systems such as the Predator and Reaper to foreign governments. U.S. officials said Friday the administration was using its "national discretion" in updating the export policy.

In a statement outlining the policy change, the White House cited the need to modernize the Missile Technology Control Regime, an informal agreement among 35 partner countries to counter the proliferation of missile systems and technologies. Under the updated policy, the administration will apply to some of the drone systems the less stringent export controls assigned to less sensitive technologies. President Trump took unilateral action regarding the policy following two years of unsuccessful negotiations among the partner countries, according to the White House statement. https://www.bangkokpost.com/business/1958019/u-s-relaxes-rules-on-sales-of-armed-drones?utm_campaign=enewsletter%20regular&utm_source=enewsletter_alert&utm_medium=Business&_extid=subscriber308416

Drones in Education: AMA Thanks Senators for Supporting Educational Programs Miriam McNabb July 24, 2020

Two U.S. Senators have successfully sponsored an amendment to Section 349 of the FAA Reauthorization Act of 2018, a change which eases the way for drones in education. The Academy of Model Aeronautics has issued a statement thanking Senator Doug Jones of Alabama and Senator Dan Sullivan of Alaska for their support of the industry. The amendment, passed as part of the National Defense Reauthorization Act for Fiscal Year 2021 on July 23, 2020, will help schools incorporate drones in education programs.

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The amendment "allows for unmanned aircraft systems flown as part of the established curriculum of an elementary or secondary school, an established Junior Reserve Officers' Training Corps program, or as part of an educational program chartered by a recognized community-based organization to be treated by the Federal Aviation Administration the same as limited recreational operations," says an AMA announcement.
https://dronelife.com/2020/07/24/drones-in-education-ama-thanks-senators-for-supporting-educational-programs/

Boeing Begins MQ-25 Stingray Testing in Fall 2020 to Support Navy

Sarah Sybert July 24, 2020 News, Press Releases

Boeing has announced that its MQ-25 Stingray, The U.S. Navy aircraft carrier-borne tanker drone, has planned to resume test flights in fall 2020, Defense News reported on Friday.

"When we resume flight testing later this year, we'll have the opportunity to gather test points about the aerodynamics of that pod and the software commands that control it — all happening well before we deliver the Navy's first MQ-25 jet with the same pod," MQ-25 program director Dave Bujold said in a statement from the aircraft's manufacturer, Boeing.

Boeing engineers will primarily focus on the aerodynamics of the store pod mounted on the Stingray test article to observe hose and drogue behavior while being dragged behind the airframe. The aerial refueling drone took its first flight Sept. 19, a historic step toward integrating an unmanned aircraft into the service's strike arm.
https://www.executivegov.com/2020/07/boeing-begins-mq-25-stingray-testing-in-fall-2020-to-support-navy-dave-bujold-quoted/

First CityAirbus UAM demonstrator public flight takes off in Bavaria, Germany

July 21, 2020 Philip Butterworth-Hayes Urban air mobility

The first public flight of Airbus' CityAirbus four-seat all-electric multicopter demonstrator took place at the company's Donauwörth, Bavaria, Germany, flight test facility on July 20, 2020.

Its eight propellers are driven by electric motors at around 950 rpm to ensure a low acoustic footprint. Its cruise speed will be

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approximately 120 Km/h on fixed routes with up to 15 minutes of autonomy. It has a capacity of four passengers that is ideal for aerial urban ridesharing. Type certification and commercial introduction are planned for 2023."

The CityAirbus full-scale demonstrator conducted its first take-off in May 2019. https://www.unmannedairspace.info/latest-news-and-information/first-cityairbus-uam-demonstrator-public-flight-takes-off-in-bavaria-germany/

Drone-Based AI Platform Helps The Shelly Company Press | UAV Expert News

Kespry, the leading drone-based aerial intelligence solution provider, today announced The Shelly Company is using the Kespry drone-based aerial intelligence platform for inventory management and mine planning. The Shelly Company is a leading Ohio limestone, concrete and asphalt paving firm with more than 90 locations and 1,600 employees. It services 81 of 88 counties in the state.

The company uses Kespry to measure contours to ensure it creates accurate mine plans. It also determines stripping calculations and ensure its vendor network delivers precise volumes and quotes. In addition, the company uses Kespry to perform before-and-after stripping surveys to validate the amounts of material that have been moved. Inventory management involving updating unit weights and product volume is another Kespry activity.

"Using Kespry helps us make informed decisions and work closely with contractors to compare stripping quantities. This ensures that we are charged the correct amount," said Chris Pike, Performance Manager, The Shelly Company. https://www.uavexpertnews.com/2020/07/drone-based-ai-platform-helps-the-shelly-company/?utm_source=Master&utm_campaign=0910fd845b-EMAIL_CAMPAIGN_2017_12_20_COPY_01&utm_medium=email&utm_term=0_35ad7bc94d-0910fd845b-89168288

Airial Robotics Launches The Gyrotrak Press | UAV Expert News

Airial Robotics, head-quartered in Hamburg, Germany, with branches in Hungary and the United Kingdom, has unveiled an innovative UAV carrier system that redefines the possibilities of commercial drone applications. The patented technology platform, Gyrotrak, is a new class of drone that exceeds industry standards in flight time, payload, range and efficiency with a modular system architecture that can be adapted to all kinds of missions.

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"Our Gyrotrak technology is a hybrid UAV solution, somewhere between helicopter and autogyro. The combination of the advantages of both systems creates a unique technical platform, that makes Gyrotrak a real game changer. Gyrotrak gives us the ability to at least double important factors like flight time, range, and payload, when compared to traditional multicopter systems. https://www.uavexpertnews.com/2020/07/airial-robotics-launches-the-gyrotrak/?utm_source=Master&utm_campaign=0910fd845b-EMAIL_CAMPAIGN_2017_12_20_COPY_01&utm_medium=email&utm_term=0_35ad7bc94d-0910fd845b-89168288

Kratos wins USAF contract for Skyborg Vanguard program 27 JULY 2020 NEWS

A Skyborg conceptual design for a low cost attritable unmanned combat aerial vehicle

Kratos Defense & Security Solutions' subsidiary Kratos Unmanned Systems Division has secured a $400m contract supporting the US Air Force's artificial intelligence Skyborg Vanguard program. Under the five-year contract awarded by the US Air Force Life Cycle Management Center, Kratos will be responsible for development, integration and prototype air vehicle delivery. The program aims to integrate autonomous unmanned air vehicle technology with open mission systems, enhancing combat capabilities for complex operations. Work under the program will be performed for the next two months at Kratos' US manufacturing and production facilities in Oklahoma and California.

Boeing, General Atomics Aeronautical Systems and Northrop Grumman also secured the contract from the AFLCMC to support the Skyborg program. https://www.airforce-technology.com/news/kratos-usaf-skyborg-vanguard-programme/

Gorgeous Thailand drone video highlights Scott Simmie Jul. 27th 2020

It's happening, right this second. Someone, somewhere, is uploading another drone video onto YouTube. Some will be good, a few will be great – and the vast majority are likely to be run-of-the-mill. Well here's one where the shooting and editing clearly put it into the "great" territory. Fasten your seatbelts and prepare to be transported to Thailand.

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I was having a quick spin through the latest Reddit threads related to drones. While there, I came across a video of Thailand that had been posted just a few hours earlier. *click*. A few seconds in, I knew it would be worth watching. I also knew, before I even clicked on the pilot's name, that he would be someone with visual expertise – and perhaps even a professional. I was right.

The person who made and posted the video is Max Harach. He's from Australia. Soon I was on the Facebook page for Max Harach Videography. It was then clear he was a pro, further confirmed by a look at his Instagram page. This guy's really good with visuals (and I say that as someone who has worked professionally in network television news and, later, in multimedia). Check these out: https://dronedj.com/2020/07/27/gorgeous-thailand-drone-video-highlights-original-mavic-pro/

Police in Mahwah, NJ use drone to find body Ty Poland Jul. 27th 2020

Early Saturday night, a man went missing in the water at the reservation in Mahwah, New Jersey. With the help of drone technology, Mahwah Police were able to aid first responders in finding the body.

The Mahwah Reservation contains 4,000 acres of wooded trails, lakes, and views of the valley. At the very top of the reservation, there is a big lake where many people will go to swim and hang out. Around 6:30 p.m. on Saturday night, a 57-year-old man went missing in the water.

Shortly after, police, divers, firefighters and other first responders appeared on location to find the body. At ground level, it can be hard to spot anything out of the ordinary in the water. However, thanks to Mahwah Police's investment in high end drone technology, they were able to locate the body in the water.

Using a thermal camera, the police were able to identify the warm body in the cooler water. From there, they were able to work with the other responders on-site to retrieve the body. Although the man had made his transition, the body was found and recovered. https://dronedj.com/2020/07/27/mahwah-new-jersey-police-use-drone-to-find-body/#more-32756

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Xi Focus: Xi inspects PLA aviation university ahead of Army Day Xinhua| 2020-07-23

huaxia XINHUANET Tuesday, July 28, 2020

Chinese President Xi Jinping visits the aviation museum of the Aviation University of the Air Force in northeast China's Jilin Province, July 23, 2020.

CHANGCHUN, July 23 (Xinhua) -- Chinese President Xi Jinping inspected the Aviation University of the Air Force in the northeastern province of Jilin on Thursday, in the run-up to China's Army Day August 1. After a visit to the university's aviation museum, he went on to watch a training course of student pilots and talked with them.

At the university's laboratory for drone technology, Xi inspected teaching facilities for drone operating systems and learned about the training of drone operators. He said with the emergence of a large number of drones of different kinds, unmanned combat has brought about profound changes in warfare.

Xi stressed strengthening research into unmanned combat, enhancing drone education as a discipline, stepping up training in real combat conditions and cultivating professionals who can use drones and take command in such warfare. http://www.xinhuanet.com/english/2020-07/23/c_139235690.htm

Aerodyne runs 18-month drone inspections trial at British Port Josh Spires Jul. 28th 2020

Associated British Ports (ABP) has successfully implemented drone technology into its asset management practices and policies. ABP used PwC's drone digital transformation team to support the adoption of drones and selected Aerodyne to provide the drones and related technology.

The successful outcome of the 18-month long demonstration will see drones throughout ABP's 12 ports and rail freight terminals over the next few years. These locations include 54 miles of quay and 15 million square feet of storage area. ABP plans to build its own drone capabilities to compliment Aerodyne's.

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The last six months of the demonstration have been focused on on-site testing at eight locations in the UK. It was used to collect data showing impressive cost-savings and improved operational safety. The drones were 25% more cost-effective and took 55% less time in comparison with current methods. https://dronedj.com/2020/07/28/aerodyne-runs-18-month-drone-inspections-trial-at-british-port/#more-32797

Skydio Launches a New Family of Commercial Drones with $100 million in Series C Funding João Antunes JULY 14, 2020

As part of its long-term vision since it was founded in 2014, the U.S. drone manufacturer Skydio announced the new X2 family of drones for enterprise and government customers. The company also announced it has raised $100 million in Series C funding led by Next47 with participation from Levitate Capital, NTT DOCOMO Ventures, and existing investors including Andreessen Horowitz, IVP, and Playground, to accelerate product development and go-to-market expansion in enterprise and public sector markets.

While Skydio's initial focus was on consumer markets with the $999 Skydio 2 (S2), various enterprises and government agencies saw the potential of Skydio Autonomy, the AI-powered brain built into every Skydio drone. The S2 has helped Civil Air Patrol, Ohio Department of Transportation, North Carolina Department of Transportation, Southern Company, Chula Vista PD, Japan Infrastructure Waymark, and Ware to simplify data collection in inspection, search and rescue, situational awareness, and emergency response use cases. According to Adam Bry, CEO at Skydio, with whom we have discussed how Skydio delivers value with automated drone flights, this new expansion beyond the consumer market is an opportunity to clarify the company's purpose to make the world more productive, creative, and safe with autonomous flights. https://www.commercialuavnews.com/infrastructure/skydio-launches-a-new-family-of-commercial-drones-designed-assembled-and-supported-in-the-usa-along-with-100-million-in-series-c-funding?utm_source=marketo&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter&mkt_tok=eyJpIjoiT0RRellUUXdNelptTjJZNSIsInQiOiIzMWZjMlhuMDNtbFwveUI4U1ZWaE9WenZYSTdkYjZzZG5Ud2ExaW1wNzJ5UkVQK1Z1SGdueE42M2VFb3hrcmVKVVF0eUU4U05BU1BUeW5FSENCTG5iT0tTVVJCdW1YRm04XC8zN1NIUktjekpLRUdTdnM5S1RoNjFRR1JxM1VyM0hPIn0%3D

NASA Chief: Uncrewed Aircraft 'Safer' Mark Huber July 27, 2020

NASA administrator Jim Bridenstine shared the agency's vision for urban air mobility at last week's EAA Spirit of Aviation virtual event.

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"You can actually make the argument that in the future it's going to be safer to fly an uncrewed aircraft than crewed aircraft," he said while outlining NASA's related programs. Bridenstine, a former congressman and U.S. Navy F-18 pilot, pointed out that sophisticated detect-and-avoid technologies, including 360-degree sensors aboard future autonomously piloted aircraft, will provide "better capabilities than what a human has" when it comes to avoiding midair or terrain collisions

Bridenstine said current air traffic control infrastructure "is not going to be able to manage" "advanced air mobility"as currently envisioned with "thousands of unmanned aerial systems operating [at] 400 feet and below doing dozens of missions in a given day. That's a very congested airspace. So what you're looking for here is the development of an autonomous system that factors in air space, traffic corridors, route planning, interaction with manned aircraft, terrain avoidance, wind and weather and the ability not only for the aircraft to be capable of dynamic rerouting, but also use dynamic airspace where the boundaries change to accommodate traffic. https://www.ainonline.com/aviation-news/general-aviation/2020-07-27/nasa-chief-uncrewed-aircraft-safer

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Five-minute drone charge technology demonstrated by Israeli company HEADLINE NEWS NEW PRODUCTS TECHNOLOGY SAM LEWIS JULY 29, 2020

StoreDot yesterday gave the first demonstration of its revolutionary five-minute, ultra-fast drone charging technology**.** The Israeli lithium-ion battery company uses nano-material and electro-chemical technologies in its innovative batteries.

Using the company's batteries, drones land in small autonomous charging stations made by third-party manufacturers. The drone can then operate on a continuous mission with only five-minute charges needed every half an hour rather than returning to base after every flight.

Dr. Doron Myersdorf, StoreDot CEO, explained: "UFC [ultra-fast charging] will also enable drone users to expand their operations into regions they could not previously access and significantly increase operational efficiencies and profitability, making the business case for drone use much more attractive than ever before." https://www.commercialdroneprofessional.com/breaking-news-five-minute-drone-charge-technology-demonstrated-by-israeli-company/?utm_medium=push&utm_source=notifications

NATO accepts delivery of fourth remotely piloted aircraft in Italy 28 JULY 2020 NEWS

After taking off from Edwards AFB in California, the aircraft landed at Sigonella following a 22-hour journey.

The arrival marks another step towards the completion of Nato AGS Force's fleet of five total aircraft. The third RQ-4D Phoenix remotely piloted aircraft was delivered less than two weeks ago.

Brigadier General Houston Cantwell said: "The arrival of the fourth aircraft enhances our capabilities with greater redundancy and flexibility. The Nato AGS Force continues our advance in becoming Nato's key provider of regional 'indications and warning' information to members of the Nato Alliance."

Movement of the aircraft from California to Italy was controlled by industry pilots at the AGS Force's Main Operating Base in Sigonella. https://www.airforce-technology.com/news/nato-accepts-delivery-of-fourth-remotely-piloted-aircraft-in-italy/

Outta Sight: Bell's APT Achieves Milestone Marc Cook July 27, 2020

The Wright Brothers had Kitty Hawk, supersonic flight had Muroc, and now Bell's Autonomous Pod Transport (APT) has rural Oklahoma, where the APT last week managed an important milestone in autonomy—flying beyond visual line of sight from its test team. According to Bell, the APT had already been proving that "it can handle this type of flight through its first BVLOS flight carrying 60 lbs of payload at a testing site in Oklahoma."

Bell intends to produce two versions of the APT, one a small quadcopter weighing 55 pounds, with a range of 18 miles at 90 knots; the other is a 300-pound UAV with a 70-pound payload, 35-mile range and a max speed of 110 knots. "Delivering goods and information to critical—sometimes inaccessible—locations calls for an aircraft that can fly autonomously, over long distances and land vertically," says Bell.

According to the company, "Bell is eager to expand APT's BVLOS flights to eventually support medical supply drops, basic supply chain operations and even kiosk deliveries. See it in flight: https://www.avweb.com/aviation-news/outta-sight-bells-apt-achieves-milestone/?MailingID=405

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Thermal drone used to save 15 baby Deer in Norway Josh Spires Jul. 29th 2020

A drone equipped with a thermal camera has been saving the lives of baby deer in Norway over the last month or so. So far the drone has saved 15 deer from 14 properties.

The project has been ongoing since mid-June. It is headed by wildlife and outfield manager Pål Sindre Svae and is under the watchful eye of Dag Bjerkestrand, the forestry manager in the Averøy municipality.

The drone has been used every morning between 2 a.m. and 6:30 a.m. from around mid-June to find injured baby deer in grasslands around the country. The drone is used at such an early hour due to the lower temperatures allowing the thermal camera to better distinguish body temperature in the thick grasslands.

The drone of choice for wildlife and outfield manager, Pål Sindre Svae is the DJI Mavic 2 Enterprise Dual, a drone equipped with both a thermal and visual cameras. It is sent up to around 73 feet and slowly scans the fields. Once a deer is spotted on the screen, a volunteer goes out to find the deer and figure out what the next move is.
https://dronedj.com/2020/07/29/thermal-drone-used-to-save-15-baby-deer-in-norway/

30Jul20

Open Cosmos selected to build Spanish smallsat constellation Caleb Henry July 29, 2020

WASHINGTON — Spanish startup Sateliot on July 28 selected Open Cosmos to build and operate a constellation of up to 100 small satellites, but stopped short of a firm contract for the full system.

Sateliot is raising funds to build the constellation, designed to connect sensors and devices from low-Earth orbit. The company has raised 2.4 million euros ($2.8 million) since forming in 2018, and hopes to raise a 7-million-euro Series A this year to fund three demonstration satellites, Sateliot chief executive Jaume Sanpera told *SpaceNews*.

Sateliot estimates it needs $35 million to deploy an initial 16 satellites by the end of 2022, he said, not counting the demonstration satellites. An exact amount for 100 satellites has not been determined, he said.

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Open Cosmos of Harwell, United Kingdom, is under contract to build two demonstration satellites for Sateliot, said Rafel Jordá, founder and chief executive of Open Cosmos. The first satellite is a 3U cubesat scheduled to launch late this year. https://spacenews.com/open-cosmos-selected-to-build-spanish-smallsat-constellation/

Hovermap: Enabling Autonomous LiDAR Mapping in Challenging, Inaccessible Areas Webinar Wednesday, August 12, 2020 | 11:00AM - 12:00PM Eastern Time

Hovermap is a SLAM-based LiDAR mapping and autonomy payload which allows drones to map and explore challenging GPS-denied environments autonomously, beyond line-of-sight. It can also be detached and used as a handheld lidar scannner. Hovermap has built a reputation for delivering high-quality data capture and unprecedented insights in the underground mining, infrastructure, survey and mapping industries. This webinar will give an overview of Hovermap and show use cases from various industries. Register at: https://www.commercialuavnews.com/webinars/hovermap-endabling-autonomous-lidar-mapping?utm_source=marketo&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter&mkt_tok=eyJpIjoiWTJVMU1HTXhaamMzTlRFMyIsInQiOiJnb05Tamo2eFwvdEV5OGMxZG90czdyVFlXS2RJQVBPME1VQklkdkVHY2Y0TUdMVG9sTDlyMWtNMjhJV0JFNnVFU0NIUzlJazd5SXYzVm56V1VFWnZQK0M2bWozZ0ZzN1wveitSOTZaVzRIXC9VOGdjSE9naXZjYTFBZUh6Q1JVZ0NDVSJ9

31Jul20

Drones for STEM Education: Group of High School Entrepreneurs Develops Solution Miriam McNabb July 30, 2020

Adding unmanned systems to a science and math curriculum has tremendous advantages for students, teachers, and the drone industry: but drones for STEM education programs are often too expensive for many school systems and may come without an easy-to-follow curriculum. COM3T Drones, a new company founded by an impressive group of ambitious high school entrepreneurs, is filling the gap. COM3T Drones offers a drone kit and in-depth online curriculum to go with it: one developed by high school students, for high school students. And at a price point under $500 for the package, COM3T is making drones for STEM education accessible.

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COM3T Drones was the summer project for a group of high school students attending the Quarter Zero Entrepreneurship program this summer. As part of this year's competition, the team built a comprehensive and compelling business case for a less expensive educational drone kit – one that included an online curriculum of topics covering basics like commercial drone applications and progressing to the hard science of mechanical engineering. The business case was so compelling that the team won the overall prize for the competition: a $1,000 check and mentorship with VC firm 1517. https://dronelife.com/2020/07/30/com3t-drones-for-stem-education/

Taking on SpaceX, Amazon to invest $10 billion in satellite broadband plan David Shepardson, Joey Roulette

WASHINGTON (Reuters) - Amazon.com Inc said on Thursday it will invest more than $10 billion to build a network of 3,236 satellites that will provide high-speed broadband internet services to people around the world who lack such access.

The announcement follows the Federal Communications Commission's approval of the plan, called "Project Kuiper", for the constellation of low-Earth orbit satellites that will compete with the Starlink network being built out by Elon Musk's SpaceX. The project will also benefit wireless carriers deploying 5G and other wireless service to new regions, Amazon said.

By comparison, SpaceX has launched over 500 satellites of the roughly 12,000 expected for its Starlink constellation in low Earth orbit and plans to offer broadband service in the United States and Canada by the year's end. The Starlink constellation will cost the company roughly $10 billion. https://www.reuters.com/article/us-usa-amazon-broadband/fcc-approves-amazon-kuiper-satellite-broadband-deployment-plan-idUSKCN24V3F2

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