UAS and SmallSat Weekly News

Contents

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5Sep20

HIGH-FLYING DRONE DROPS BAGS OF WEED OVER TEL AVIV *9/3/2020*

It's cloudy with a chance of cannabis in Tel Aviv ... a drone dropped bags of weed over a city square, sending folks running into the streets for the gratis greens. Dank started dropping from the skies over Rabin Square Thursday, a ganja gift from local activists seeking to legalize it. As you can see in the video, the free baggies of bud started fluttering down from a high-flying drone, and people scrambled to scoop up the strains in the middle of traffic.

Pro-legalization group Green Drone hinted at the operation beforehand in a message on Telegram, saying ... "The time has come. Is it a bird? Is it a plane? No, it's the Green Drone sending you free cannabis from the skies."

The fun police, AKA actual police, put a stop to it all, though -- cops say they arrested 2 men who allegedly operated the drone. Police claimed the bags were packed with "a dangerous drug." Hey, not everyone's come around on marijuana.
https://www.tmz.com/2020/09/03/drone-drops-weed-marijuana-tel-aviv-free-bags/

Teal unveils commercial sUAS platform with availability for enterprise and public sector APPLICATION NEW PRODUCTS ALEX DOUGLAS SEPTEMBER 4, 2020

Designed and manufactured entirely in the US to “ensure the highest levels of data security and performance,” Teal already has pilot programs running at Fortune 500 companies, as well as many government agencies.

Golden Eagle serves as a dual-use platform and was recently selected as an approved system for the Department of Defense and Federal Government as part of DIU’s Blue sUAS Project and will soon be available on the GSA schedule.

Recent numbers from Barclays estimates the global commercial drone market will grow tenfold to $40 billion in five years. Teal is the only company among those behind this growth that offers a fully US-made system and with production capabilities to scale and drive mass adoption.

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Teal says it is immediately focused on bringing Golden Eagle to customers in civil and defense, as well as in commercial industries, including agriculture, surveying, construction, energy and logistics. https://www.commercialdroneprofessional.com/teal-unveils-commercial-suas-platform-with-availability-for-enterprise-and-public-sector/

Australian chameleon-like defense drones are here Josh Spires Sep. 4th 2020

The University of South Australia and the Australian Department of Defense has successfully created a drone that can change colors on demand. The new creation will allow drones to be almost hidden in plain sight while on military missions.

The scientists from the University of South Australia wanted to solve the biggest problem facing drones that are supposed to be hidden — the always-changing color of the sky. The team, lead by Dr. Kamil Zuber, has now been able to produce a range of lightweight polymer panels that can change colors on demand and can retain it without the need for constant power. Plus the switching can be done with an AA battery.

The panels can be made out of rigid or flexible materials and are inexpensive to produce. The team built a small drone and put the panels on it for testing purposes. They found the panels worked great blending into the sky in various situations. Currently, five or six materials are being used, with each material being able to produce two or three colors.
https://dronedj.com/2020/09/04/australian-chameleon-like-defense-drones-are-here/

Shell and Baker Hughes Venture Going Big on Methane-Hunting Drones September 3, 2020 News

Shell said this week that in July it inked a deal with Baker Hughes' drone venture company, Avitas, to expand drone-monitoring services at its unconventional assets in the Permian Basin. The operator will leverage the drone's optical gas-imaging camera and laser-based detection system to bolster its methane-leak detection and repair program. The drones will play a critical role in Shell's goal to limit emissions at its North American operations to below 0.2% of its produced natural gas volumes by 2025.

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Shell has been testing Avitas' drone technology in the Permian since 2018 at a small number of facilities. The pilot tests required approval in 2018 from the Federal Aviation Administration to fly the drones beyond visual line of sight which was previously prohibited.

With the technology proven out, the new plan will cover Shell's entire operating area in the Permian of more than 500 locations, including 150 that are designated for federal air-quality reporting regulations. Shell holds interests in about 500,000 acres in the Permian, which include more than 1,300 operated and non-operated wells. https://uasweekly.com/2020/09/03/shell-and-baker-hughes-venture-going-big-on-methane-hunting-drones/?utm_source=rss&utm_medium=rss&utm_campaign=shell-and-baker-hughes-venture-going-big-on-methane-hunting-drones&utm_term=2020-09-04

Martin V-BAT Is the First VTOL UAS Evaluated During a Coast Guard Patrol

September 3, 2020 News

Martin UAV, in collaboration with the Coast Guard Research and Development Center, began a deployment on board a Coast Guard cutter on Aug. 13-14, 2020 to assess how Vertical Take-off and Landing, medium-range UAS capabilities might be used to support Coast Guard operations, including Beyond Visual Line of Sight operations.

The patrol data also can be used to refine a concept of operations and requirements for installing and integrating VTOL UAS across Coast Guard cutter classes. This is the first evaluation of a VTOL medium-range UAS during a Coast Guard patrol.

"UAS technology has already proven to be a game-changer for the Coast Guard. It impacts timelines for obtaining a statement of no objection for boarding vessels, provides situational awareness for boarding crews prior to embarking on targets of interest and provides a better covert means for tracking targets of interest, resulting in enhanced maritime domain awareness and mission execution," explained Stephen Dunn, RDC aviation research scientist. https://uasweekly.com/2020/09/03/martin-uav-v-bat-selected-as-the-first-ever-vtol-uas-to-be-evaluated-during-an-operational-coast-guard-patrol/?utm_source=rss&utm_medium=rss&utm_campaign=martin-uav-v-bat-selected-as-the-first-ever-vtol-uas-to-be-evaluated-during-an-operational-coast-guard-patrol&utm_term=2020-09-04

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Dedrone enters strategic partnership to provide counter-drone tech APPLICATION

COUNTER-DRONE INTERNATIONAL NEWS ALEX DOUGLAS SEPTEMBER 4, 2020

General Dynamics Missions Systems and Dedrone have entered into a strategic counter-drone partnership, providing General Dynamics' global network with access to Dedrone's detection and defeat technology. As part of the agreement, General Dynamics Mission Systems becomes a value-added reseller for Dedrone's counter-unmanned aerial system capabilities and has made a significant equity investment in Dedrone.

General Dynamics will exclusively supply Dedrone's counter-drone technology to their global defense, civil government, intelligence and critical infrastructure customers.

Chris Brady, president of General Dynamics Mission Systems and a newly-appointed member of Dedrone's advisory board, said: "The intrusion of private and restricted airspace by unmanned aerial systems is one of the fastest-growing threats facing our customers, and Dedrone's counter UAS technology platform is the market-leading solution to defeat those threats." https://www.commercialdroneprofessional.com/dedrone-enters-strategic-partnership-to-provide-counter-drone-tech/

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Ban on Chinese Drones Complicates Federal Firefighting Efforts, Leaked Memo Says Sherin Shibu September 1, 2020

In October, the agency grounded its drone fleet to review whether Chinese-manufactured technology poses a national security threat. At the time, it had 810 drones to monitor federal lands. Of those, 786 were Chinese-made and 121 came from China-based DJI. That order was renewed in January, and the review is ongoing.

"Drones are important to critical Department of the Interior missions, such as combating wildfires and conducting life-saving search and rescue operations; however, we must ensure that the technology used for these operations is such that it will not compromise our national security interests," Interior Secretary David Bernhardt said in January.

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"Drone operations will continue to be allowed in approved situations for emergency purposes, such as fighting wildfires, search and rescue and dealing with natural disasters that may threaten life or property."

In a Tuesday statement, an Interior Department spokesperson said "the Office of Wildland Fire has continued using the drone fleet during their wildfire response operations. So far this year and despite challenges associated with COVID-19, DOI has conducted fuel management treatments on nearly 1 million acres, putting us ahead of our 10-year average." https://www.pcmag.com/news/ban-on-chinese-drones-complicates-federal-firefighting-efforts-leaked-memo

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Amazon gains FAA operations approval, becomes latest member of GUTMA

September 4, 2020 Jenny Beechener UAS traffic management news

Amazon is the latest company to join the Global Unmanned Air Traffic Management Association. The company has just been granted a Part 135 air carrier certificate from the Federal Aviation Administration, enabling its delivery arm Prime Air to move to the next stage of testing.

“This indicates the FAA’s confidence in Amazon’s operating and safety procedures for an autonomous drone delivery service that will one day deliver packages to our customers around the world,” David Carbon, VP of Prime Air, said in a statement.

“We will continue to develop and refine our technology to fully integrate delivery drones into the airspace and work closely with the FAA and other regulators around the world to realize our vision of 30 minute delivery.”

Other major delivery companies to be issued Part 135 air carrier certificates by the FAA include UPS and Google in 2019. https://www.unmannedairspace.info/latest-news-and-information/amazon-gains-faa-operations-approval-becomes-latest-member-of-gutma/

Rocket Lab Unveils First Operational Photon Smallsat Irene Klotz September 03, 2020

CAPE CANAVERAL—The Electron rocket’s kick stage that dispatched a small satellite into orbit for customer Capella Space on Aug. 31 has become a free-flying demonstration of Rocket Lab’s Photon satellite platform, the company disclosed on Sept. 3.

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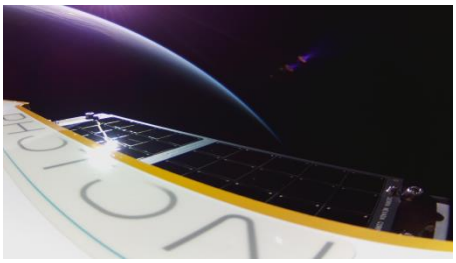

The satellite, known as "First Light," is the first of a series of Photon spacecraft that build on the Electron small satellite launcher, expanding the array of services from the privately owned, Long Beach, California-based company.

Rocket Lab's 14th Electron rocket, carrying Capella's 220-lb. synthetic aperture radar Earth-observing satellite, lifted off from the company's New Zealand launch site at 3:05 p.m. Aug. 31 local time. After deploying Capella's Sequoia spacecraft into a 310 mi-high orbit, the kick stage transformed into a Photon satellite, CEO Peter Beck said during a Sept 3 presentation on YouTube.

"This action marked the first on-orbit demonstration of Rocket Lab's Photon satellite as a two-in-one spacecraft, first using it to complete its conventional launch vehicle function to deploy customer satellites, then transitioning into a satellite to continue a stand-alone mission," Rocket Lab said in a statement. "This pathfinding mission is an initial demonstration of the new power management, thermal control and attitude control subsystem capabilities," Rocket Lab said. https://aviationweek.com/aerospace/commercial-space/rocket-lab-unveils-first-operational-photon-smallsat?utm_rid=CPEN1000003332045&utm_campaign=25345&utm_medium=email&elq2=45b7300f47e048c5a30c30bf9e597acf

senseFly drones deployed to monitor Lake Winnipeg ice hazards APPLICATION

HEADLINE NEWS ALEX DOUGLAS SEPTEMBER 7, 2020

The project, conducted as part of the Canadian Space Agencies Earth Observation Applications Development Program, aimed to identify and monitor the levels of lake ice and detect cracks and pressure ridges to raise awareness among local communities and first responders about the risks of lake ice travel.

The onset of melting ice – which begins in spring – is a critical time for monitoring ice, as it can result in pressure ridges, leads and cracks appearing and exposing open water. Pressure ridges can extend 3m above the surface and expand to more than 100km on larger lakes, and in winter can create significant obstacles for lake ice travel and increase the risk of collision. In cold periods, thin ice can also form in cracks, which may become covered in snow overnight and produce an unseen hazard the following day.

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senseFly's eBee Plus drone was used to map the South basin of Lake Winnipeg, thanks to its ability to withstand extreme temperatures while mapping larger areas per flight than other UAVs with a similar weight.

Having reliable equipment that can operate in rapidly changing temperatures was crucial to allow the team to gather precise and reliable on-the-ground data in conditions that ranged from -20°C to +20°C. In addition, utilizing drone technology eliminated the need for traditional ground mapping techniques which could be dangerous on a surface where ridges continuously open and close. https://www.commercialdroneprofessional.com/sensefly-drones-deployed-to-monitor-lake-winnipeg-ice-hazards/

Persistent Systems supports Air Force's Advanced Battle Management System experiment APPLICATION MILITARY ALEX DOUGLAS SEPTEMBER 7, 2020

Unlike the traditional platform-centric program with a prime contractor, Advanced Battle Management System brings together dozens of companies in a multi-billion-dollar effort to build a military internet of things. The goal is to connect computers, sensors and shooters at machine-speed, thus fulfilling the U.S. Department of Defense's vision of Joint All Domain Command and Control.

Taking place at multiple military sites, ABMS On-Ramp 2 simulated an attack on U.S. national infrastructure. Adrien Robenhymer, VP of business development for Persistent Systems, said, "Our Wave Relay MANET technology played a major role in delivering that mobile connectivity fabric."

At Nellis AFB, in Nevada, Persistent seamlessly connected strategic convoys with dismounts, sensors, vehicles, and other supporting assets—enabling and defending a mobile command-and-control capability.In doing so, the company leveraged its work with U.S. Global Strike Command and the Air Force Research Lab on the WaRTAK and follow-on ROP programs. https://www.commercialdroneprofessional.com/persistent-systems-supports-air-forces-advanced-battle-management-system-experiment/

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Enterprise Grade Security for Enterprise UAS Operations Monday, September 14, 2020 | 1:00PM - 2:00PM Eastern Time

Join Kittyhawk CTO and Founder Josh Ziering for a comprehensive guide to securing your drone operations from data attacks, hacks and gaps. This talk will provide critical information and practical steps anyone can take to reduce the risk profile of their drone program. Specifically, you'll learn how to leverage a security posture, risk assessments, data classification, and encryption to form a security moat around your drone data - often the most sensitive data one can collect.

Registrants for this webinar will also receive a free copy of a new Kittyhawk security whitepaper. https://www.commercialuavnews.com/webinars/enterprise-grade-security-for-enterprise-uas-operations?utm_source=marketo&utm_medium=email&utm_medium=email&utm_campaign=uav_webinar_kittyhawk&utm_campaign=newsletter&utm_content=digital%3Futm_source%3Dmarketo&utm_content=newsletter&mkt_tok=eyJpIjoiWVRkbVlXVm1abU0yWVRoayIsInQiOiJRZFVLdGY2RDhEYkxCb0FcL1BranlRWTdmcFdHM1wva0pwenZ3alB5NDk0XC9ISTlLOGxkYlY5MjBRbktFRzBVeE5lYWFDSHlcL09TS1NIdTlETXh3U1M2ZHY0RnowUFM4NHBBZWU2U1dBYUE5RHVOTDBkWitcL3Z1bUtLRVo2T2M3cTJJIn0%3D

First cross-border 5G drone flight completed above Latvia Josh Spires Sep. 7th 2020

Latvian Mobile Telephone (LMT) has completed the first cross-border drone flight run completely on its 5G network. It sent the drone to neighboring Estonia. The drone flight spanned more than 5 miles and used two SIM cards to stay connected.

The first drone flight was live-streamed to LMT's YouTube channel with a live feed from the drone, the flight path, a camera following the drone, and a view of company executives talking about the flight.

The beyond visual line of sight flight was performed during the LAMPA Conversation Festival as a part of the discussion for drone use in the future. The drone had two SIM cards on board, one connected to the Latvian mobile network and the other connected to the Estonian mobile network. This setup allowed for a smooth transition from one network to the other, which took a few milliseconds. https://dronedj.com/2020/09/07/first-cross-border-5g-drone-flight-completed-above-latvia/

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IAI Introduces "MultiFlyer", A Fleet of Small Helicopter UAVs for Non-Military Tasks September 7, 2020 News

Israel Aerospace Industries has introduced MultiFlyer, a UAV squadron of small unmanned helicopters that can fulfill a large range of non-military tasks. MultiFlyer provides advanced monitoring capabilities for large areas and is based on commercial, off-the-shelf helicopter UAVs from Alpha Unmanned Systems integrated with components from IAI and several Israeli startup companies. The command and control system was designed by Simplex and the area scanning technologies are powered by Sightec. Use cases include disaster area monitoring, guiding rescue units in lifesaving missions, traffic control in mass events, securing sensitive facilities, police enforcement and surveys of large agricultural and marine areas.

MultiFlyer transforms what would otherwise be several isolated UAV missions into a cloud of information. MultiFlyer can be activated from a tablet or smartphone that serves as a single point of control of several synchronized missions including automated takeoff and landing, flight routes and mission management. The system network connection is secured to allow several simultaneous users. The system can be used with different types of UAVs and drones as well as different types of payloads. https://uasweekly.com/2020/09/07/iai-introduces-multiflyer-a-fleet-of-small-helicopter-uavs-designed-for-non-military-tasks/?utm_source=rss&utm_medium=rss&utm_campaign=iai-introduces-multiflyer-a-fleet-of-small-helicopter-uavs-designed-for-non-military-tasks&utm_term=2020-09-07

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Urban Air Mobility

Vehicles are in flight testing and trials, regulations are taking shape, airspace operating concepts being promulgated, infrastructure needs addressed and c ommunities engaged. Despite the pandemic, urban air mobility is clearly maki ng progress. And it is now just one part of the wider field of advanced air mob ility –

AAM: new and novel forms of air transportation enabled by advances in elect ric propulsion, digital flight control and other technologies.

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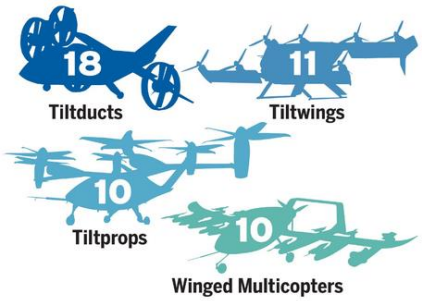
eVTOL: How Many Players?

Aviation Week's analysis of the Vertical Flight Society's directory of electric vertical-takeoff-and-landing (eVOTL) concepts reveals almost 130 commercial programs had been launched by early August. This excludes noncommercial concepts such as academic and amateur projects.



Which eVTOL Design Will Win?

https://aviationweek.com/awst/UAM?utm_rid=CPEN1000003332045&utm_campaign=25346&utm_medium=email&elq2=25717fe5c86b431a9751daa7b6f3609b

No, Amazon Won't Deliver You a Burrito by Drone Anytime Soon

Several companies are testing airborne deliveries. But rules are years away, and no one knows if consumers are even interested.

Amazon's Prime Air won FAA approval this week to begin making drone deliveries. Despite the challenges, the promise of US drone deliveries is attracting some big players. This week, Amazon received a Federal Aviation Administration certificate to begin its own drone deliveries, making it the third company after UPS and Alphabet's Wing subsidiary to do so. Amazon also has drone development centers in the UK, Austria, France, and Israel. Executives have made clear that they see drones as part of a strategy to deliver packages more quickly. The tech may have other benefits, too: Drones are battery-powered, and don't spew emissions like a delivery van. Nor do they clog up roads. These tiny flyers are going to fill the skies, transforming entire industries for the better—and worse.

Elsewhere in the country, UPS and Matternet are operating in a Raleigh medical facility and a retirement facility in Florida, where it delivers prescriptions. Wing delivers pastries, FedEx packages, first aid kits, and, during the pandemic, library books to homes in a southwestern Virginia town. (Wing also operates in Australia and Finland.) Delivery startup Zipline, which has for three years transported blood and plasma transfusions and samples in Rwanda and Tanzania, now flies PPE in North Carolina.

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Despite all the experimentation and official paperwork, getting your next Prime order or burrito by drone is likely years off. There are three big reasons: The government needs to write rules. The companies need to find business models. And no one even knows if anyone wants their burritos by drone. https://www.wired.com/story/amazon-wont-deliver-burrito-drone-soon/?bxid=5bea0f4d3f92a404695e217a&cndid=51561831&sourcecode=thematic_suitesheet&utm_brand=biz&utm_campaign=aud-dev&utm_mailing=thematic_business_090720&utm_medium=email&utm_source=nl&utm_term=Thematic_Business

Drones on Military Bases: Easy Aerial Competes to Create the Air Force "Base of the Future" Miriam McNabb September 04, 2020

AFWERX, the catalyst for fostering innovation within the U.S. Air Force, announced Easy Aerial as one of the top 92 participating teams selected from across the globe competing to build the Base of the Future Challenge.

"The AFWERX Challenge is centered around six topics – Base Security, Installation Resilience, Leveraging Technology for Operational Effectiveness, Reverse Engineering, Culture of Innovation, and Airman and Family Wellbeing," says an Easy Aerial press release. Easy Aerial is competing in the **Leveraging Technology for Operational Effectiveness Challenge** – a challenge to leverage artificial intelligence, additive manufacturing and machine learning to build an Air Force base "that becomes a leader in innovation."

The Base of the Future theme was inspired by Tyndall Air Force Base in Florida, which was destroyed in 2018 by Hurricane Michael. Congress has approved a $3 billion military construction rebuild program: the Base of the Future Challenge is based on the hope that Tyndall will be rebuilt as a model of innovation for military services around the world.

Easy Aerial provides drone-based monitoring and inspection solutions designed and built in the U.S. Easy Aerial solutions "are fully autonomous, all-weather capable, portable, rugged, and specifically designed for military applications," says the announcement. https://dronelife.com/2020/09/04/drones-on-military-bases-easy-aerial-competes-to-create-the-air-force-base-of-the-future/

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Teal Unveils Golden Eagle Commercial sUAS Platform September 7, 2020 News

Teal today announced the public launch and immediate availability of Golden Eagle, a new US-made commercial drone system that provides aerial surveillance and awareness through scalable, secure, and rugged technology. Designed and manufactured entirely in the US to ensure the highest levels of data security and performance, Teal already has pilot programs running at Fortune 500 companies, as well as many government agencies. Golden Eagle serves as a dual-use platform and was recently selected as an approved system for the Department of Defense and Federal Government as part of DIU's Blue sUAS Project and will soon be available on the GSA schedule.

"Golden Eagle is the system we've always wanted to build. It's the culmination of five years of work to bring to market a combined hardware and software platform that maintains the ethos of Teal One, but with new industrial-grade technology ready for the most demanding aerial operations," said George Matus, founder and CEO of Teal.
https://uasweekly.com/2020/09/07/teal-unveils-golden-eagle-commercial-suas-platform/?utm_source=rss&utm_medium=rss&utm_campaign=teal-unveils-golden-eagle-commercial-suas-platform&utm_term=2020-09-08

'Get out of the water!' SplashDrone gets a waterproof speaker Scott Simmie Sep. 8th 2020

Lifeguards, rejoice: You can now issue orders over bodies of water directly by drone using a new megaphone designed to be carried by a waterproof drone. Swellpro's new flying speaker is 100 watts, can be heard up to 40M horizontally from the drone, and could be a really useful tool for lifeguards and others.

Imagine you're a lifeguard working a busy beach. You spot a boat doing unsafe maneuvers just outside the swimming zone. Unfortunately, it's too far from the beach for your hand-held megaphone to reach. A new product released by Swellpro – which manufacturers the waterproof SplashDrone – may be a solution: A waterproof loudspeaker that can attach to the SplashDrone 3+ drone and deliver your message – loud and clear. The HQQ megaphone module

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is essentially a payload consisting of the speaker itself, along with an integrated streaming camera. https://dronedj.com/2020/09/08/waterproof-drone-gets-a-waterproof-speaker/#more-35263

Bell Snags BVLOS Drone Status with Choctaw Nation Jason Reagan September 08, 2020

Bell Aircraft Corporation soared through FAA drone benchmarks, landing beyond visual line of sight (BVLOS) status with its Autonomous Pod Transport (APT).

The project is a collaboration with the Choctaw Nation of Oklahoma (CNO). In an agreement announced in late 2019, Bell had joined CNO's Unmanned Aircraft Systems Integration Pilot Program team. Bell's APT can handle BVLOS flight carrying 60 pounds of payload. The CNO is one of nine sites selected by Transportation Sec. Elaine L. Chao.

In addition, Bell and CNO signed an agreement earlier this year to allow Bell test flight privileges. Bell will also provide guidance to CNO to create an Emerging Aviation Technology Test Center covering safety and efficient flight operations. https://dronelife.com/2020/09/08/bell-snags-bvlos-drone-status-with-choctaw-nation/

Aerodyne Group sets up new entity in Kazakhstan to conquer new market

APPLICATION BUSINESS ALEX DOUGLAS SEPTEMBER 9, 2020

As part of Aerodyne's continued global market expansion, the new entity, Aerodyne Caspian, has been formed through an equity joint venture agreement between Aerodyne Group and two Kazakh-registered drone and logistics companies.

Aerodyne Caspian will see the DT3 company extend its AI-based drone solutions portfolio to potential customers in Kazakhstan.

Aerodyne Caspian will combine smart drone technologies and AI-based data analytics to provide an end-to-end cloud-based asset management solution, "vertikaliti", to businesses across industries, including energy, utilities, renewables, oil and gas, solar and infrastructure.

Kamarul A Muhamed, Aerodyne Group founder and CEO, said "Aerodyne's solutions are already delivering significant performance improvement and cost optimization in 35 countries across the world and now we are excited to provide additional value to forward-looking

enterprises across Central Asia." https://www.commercialdroneprofessional.com/aerodyne-group-sets-up-new-entity-in-kazakhstan-to-conquer-new-market/

Ecologists use drone capable of tracking endangered animals Josh Spires Sep. 9th 2020

Ecologists have turned to Australian-made drone technology to help track down endangered animals autonomously and efficiently. The drones can reach areas with ease and mark the location of the animals without needing to follow them.

Dr. Debbie Saunders has focused on endangered animals for the last 20 years, learning about their movements and migration patterns. Saunders got a team together and began work on a drone sensor that could locate and track radio tags. Three years later, it's done.

The current way the animals are tracked means people have to walk out into areas and hope handheld trackers find the animals with the tags on. The best way to do this is to get up high. The drone-mounted sensor allows the tracker to get much higher. The drone allows ecologists to search hundreds of hectares in a couple of days and track up to 40 animals at once. Once the drone has an animal tracked, it stores the location in a database and moves on to find the next animal.

Once a working prototype was built, it got traction from locals and scientists from around the world. This allowed Saunders to found her new company, Wildlife Drones. The drones are now used by government agencies, the Victorian Zoo to track orange-bellied parrots, and to track rare pangolins in Vietnam. In New South Wales, Australia, koalas are being tracked after they are released back into the wild to watch their movements and survival rate.
https://dronedj.com/2020/09/09/ecologists-use-drone-capable-of-tracking-endangered-animals/

US Military is testing an Israeli-built drone interception system Josh Spires Sep. 9th 2020

The US Military is currently testing an Israeli-built drone interception system. It is already being flown along the Gaza border, and US soldiers are being trained to use it.

The US Military has opened a new project that is looking into the possibility of controlling drones with virtual reality and augmented reality. The project will use

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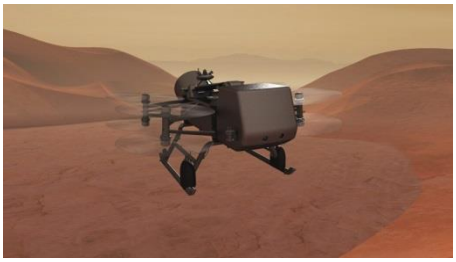
small fast drones that can disable other drones by dropping a net on them. The US Military has begun training with the new system to eventually use it on the battlefield.

The Skylord system from XTEND uses a combination of AR and VR to give the drone pilot a better view of the action. The drone is equipped with an FPV camera that automatically tracks the target drone with an on-screen hitbox. Once the pilot is just above the target drone, they release the net, which gets caught in the drone's propellers and forces it to fall to the ground. You can watch a short demo of the drone interception system: https://dronedj.com/2020/09/09/us-military-is-testing-an-israeli-built-drone-interception-system/#more-35317

Dragonfly is a 'relocatable lander' drone designed to fly on Saturn's Titan moon

Nicholas Terry Sep. 9th 2020



Titan, one of Saturn's many moons, is a good place to fly a drone. This is due to the fact that Titan's atmosphere is four times denser than the Earth's. So when NASA chose Titan as the next location to "search for the building blocks of life," they decided to use a drone instead of a typical rover. Dragonfly is a large drone with eight rotors that weighs in at around 1,200 pounds. It will be approximately the same size as the Curiosity rover, only much more maneuverable.

Titan was chosen for many reasons. It has a nitrogen-based atmosphere similar to Earth, has methane rain and has other organics formed in the atmosphere that "fall like light snow." NASA currently has plans to launch Dragonfly in 2026. The rover will arrive at Titan in 2034, eight years later. Utilizing thirteen years of weather data captured by Cassini, Dragonfly should be greeted by calm weather. Upon arrival, the goal is to land in Titan's equatorial region, largely consisting of dunes. Dragonfly will fly about 110 miles over the course of two and a half years. https://spaceexplored.com/2020/09/09/dragonfly-drone-saturn-moon-titan/

10Sep20

Walmart testing service to deliver groceries and other products by drone IRINA IVANOVA SEPTEMBER 9, 2020 MONEYWATCH

Walmart says it is testing delivery of groceries and household items using automated drones, joining other retailers looking to beef up their delivery business amid the coronavirus.

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The retailer launched a pilot on Wednesday in partnership with Flytrex, a drone-delivery company. The project, which will run in Fayetteville, North Carolina, will drop off "select grocery and household essential items" from Walmart stores to shoppers.

Walmart emphasized the experimental nature of the drone project, saying it would help the company learn about how customers and the retailer's workers use the technology.

Walmart customers can download the Flytex app to see if they're eligible for drone delivery, a Walmart spokesperson said. Last month, Amazon obtained approval from the Federal Aviation Administration for its own drone delivery system, which aims to convey packages to customers in 30 minutes or less. UPS and Alphabet subsidiary Wing also have FAA approval to do drone deliveries. https://www.cbsnews.com/news/walmart-delivery-drone-testing/

Airservices and QUT join forces to develop automatic drone management technology

Aimee Chanthadavong | September 9, 2020

QUT researcher Dr Aaron Mcfadyen has mapped air traffic around airports.

Airservices and Queensland University of Technology (QUT) have inked a partnership to develop an automated and near real-time flight approval system to speed up how quickly drones can operate, particularly during emergencies and pandemics.

The technology will be used to replace the current manual process that typically requires drone operators to fill out paper-based forms to be considered for approval to operate their drones. This process can often take weeks and lack consistency due to the manual assessments that are undertaken. By introducing an automated approval system, which will involve developing risk maps to understand where it's safe to allow drones to operate, drone operators will be able to receive approvals much faster.

The collaboration, due to be in full swing from November, aims to introduce the technology to Australia's major airports where air traffic is the most complex and busiest. There are also plans to expand the use of the management system during emergencies and disasters. https://www.zdnet.com/article/airservices-and-qut-join-forces-to-develop-automatic-drone-management-technology/

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DroneShield to accept around $9.5m in applications as it closes share purchase plan APPLICATION BUSINESS INTERNATIONAL NEWS ALEX DOUGLAS SEPTEMBER 10, 2020

The security tech developer received applications to raise approximately $15.3 million, but will scale-back the applications and refund outstanding funds to shareholders.

According to a report in the Market Herald, DroneShield recently completed a $7.5m placement through the issue of 60m fully paid ordinary shares at a price of 12.5 cents each. The company now has around $17m in funding which it will use to drive growth in target markets.

However, the Market Herald report went on to explained how despite the announcement, DroneShield has dropped 11.8% on the market, and shares are trading for 15 cents each. https://www.commercialdroneprofessional.com/droneshield-to-accept-around-9-5m-in-applications-as-it-closes-share-purchase-plan/

PIPISTREL BEGINS TO ACCEPT ORDERS FOR NUUVA SERIES OF CARGO EVTOL AIRCRAFT

AJDOVŠČINA, SLOVENIA – 1 September 2020: Pipistrel, the pioneer of Type Certified electric aviation, is presenting the Nuuva V300 as the flagship model of the Nuuva series of unmanned air vehicles. This one-of-a-kind aircraft can carry up to 460 kg, is easy and economical to operate and offers the efficiency and reliability of electric powertrains. Entry into service is planned for the second half of 2023. The Nuuva V300, with its simplicity, efficiency, and autonomy, is targeting to deliver a 10x improvement in economics to the operator.

The V20, shares the same architecture and advantages of the larger V300 but is designed as a lightweight cargo courier carrying payloads of up to 20 kg. https://www.pipistrel-aircraft.com/pipistrel-begins-to-accept-orders-for-nuuva-series-of-cargo-evtol-aircraft/

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11Sep20

Anduril unveils rugged Ghost 4 recon UAV with radio silent, autonomous ops

Garrett Reim 10 September 2020

Startup Anduril Industries has unveiled its Ghost 4, the latest variant of its autonomous tactical drones. Its on-board computer, which has 32 teraops of processing power, allows the drone to use artificial intelligence programs to make decisions and identify targets autonomously.

The drone's unveiling comes after Anduril raised a $200 million round of capital in July to further develop its suite of products. The company said that funding round raised its valuation to $1.9 billion.

The Ghost 4 has been ruggedized to make it more suitable for military users. It has new shock, heat, cold and water-proof qualities. It can survive basically any environment. You could submerge it in up to a meter of water. You can salt spray this thing all day long and not have any problem.

The UAV also breaks down to fit inside a small backpack. Every part is a quick release or a quick lock mechanism, including the rotors. The rotor blades, landing gear and tail have a clip mechanism for attaching. It has a cruise speed of 52kt and can fully recharge in 35 minutes and cover 100 miles on a single charge. https://www.flightglobal.com/military-uavs/anduril-unveils-rugged-ghost-4-recon-uav-with-radio-silent-autonomous-ops/140126.article

Manifold Robotics Announces New Collaboration with NYPA September 9, 2020 News

With partial funding from the New York State Energy Research and Development Authority, new sensing technologies and algorithms will be developed and commercialized to enable UASs to detect, avoid and autonomously track along transmission lines using the electromagnetic fields they emit. The EMF naturally produced by all energized transmission lines will enable UASs to safely traverse electric utility right-of-ways with improved location awareness of power lines.

Manifold Robotics is developing a sensor-based detection method for identifying energized power lines in the vicinity of an unmanned aircraft. Based on technology originally developed by the U.S. Army at New York University, the technology enables UASs to sense EMF from

transmission lines at a distance. Through Manifold Robotics, the team is now working to continue developing and fine-tuning the technology for UAS-based commercial applications.
https://uasweekly.com/2020/09/09/manifold-robotics-announces-new-collaboration-with-nypa/?utm_source=rss&utm_medium=rss&utm_campaign=manifold-robotics-announces-new-collaboration-with-nypa&utm_term=2020-09-10

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