



UAS and SmallSat Weekly News

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11Sep21

Commaris™ SEEKER™: Terrafugia Launches New Brand, New Drone Miriam

McNabb September 09, 2021



The [Commaris™](#) SEEKER™ is an electric, fixed-wing/VTOL hybrid aircraft designed for **autonomous commercial aerial applications**.

“This UAV is designed to perform a wide variety of commercial inspection operations such as power, gas, oil, mapping, agriculture, and security,” said Kevin Colburn, President of Terrafugia and Commaris. “Our

commercial-grade UAV will deliver results that typical rotary-wing UAVs or helicopters cannot come close to providing.”

It offers more than **three hours** of flight time without a battery change, supports multiple payload configurations, and travels at a top speed of over 60 mph. It can carry a payload of up to **10 pounds**; and its modular design can be assembled or disassembled in the field in under **three minutes**. And, with all electric motors with a noise signature of only 40 decibels on the ground and near-silence at 500 feet AGL, the Commaris SEEKER is **very, very quiet**.

DRONELIFE spoke with Commaris Manager of Business Development Fred Bedard on the floor of Commercial UAV Expo in Las Vegas this week, where the SEEKER was on display:

<https://dronelife.com/2021/09/09/commaris-seeker-terrafugia-launches-new-brand-new-drone/>

AEE Technology Launches a New Drone and a New Collaboration to Save Lives

Worldwide João Antunes SEPTEMBER 8, 2021



Based in Walnut, California, [AEE Technology](#), a developer of commercial UAVs, has added a new drone, the Mach 6. It will strengthen a partnership with Schiller Americas, a medical equipment manufacturer in Doral, Florida, to bring to market aerial delivery systems for **automated external defibrillators** to save lives worldwide.



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Designed for missions from Public Safety to Mapping and Survey operations, the Mach 6 features a weather stable design that folds for ease of transport, a flight time of up to 50 minutes, a range of up to 7 miles, 13.2 lbs. of total payload capacity, a millimeter radar for collision avoidance as well as RTK compatibility for precision mapping. It comes with three smart payload ports that allow pilots to choose from a wide range of camera payloads.

Mike Kahn, AEE Chief Marketing Officer, said "The new Mach 6 is a good example of what public safety agencies need, they can carry three different payloads at once like a thermal camera, megaphone, or spotlight and control each one remotely from the ground station, so that they can have access to accessories and payloads when they need them." https://www.commercialuavnews.com/public-safety/aee-technology-launches-a-new-drone-and-announces-a-new-collaboration-to-save-lives-worldwide?utm_source=marketo&utm_medium=email&utm_campaign=newsletter&utm_id=newsletter&utm_content=newsletter&mkt_tok=NzU2LUZXSj0wNjEAAAF_a4zWBzFubjJfruGsb334C8MFHvESDKelusO8dGf1CGIIA7_PS_X58mzBx8CBpBRYpRPSD-GRIbXlwio_CZVX-JaYiTSTrORNvxNIgQCScOFW

The Billion Dollar Club: Archer and Joby Go Public AUGUST 30, 2021 Juan Plaza



Image Courtesy of Joby Aviation

A few months ago, we published an article about [SPACs](#) (special purpose acquisition companies) and the strong influence they were having in the growing air mobility industry. Now that influence is materializing in the form of millions poured into research & development of these non-traditional aerial platforms. On August 21st [Archer aviation](#) announced that it is confirming the proposed business combination with Atlas Crest Investment Corp., a SPAC. This business combination was first announced in February, and in a few short weeks, Archer will be a public company.



Image Courtesy of Archer Aviation

A similar situation happened with [Joby Aviation](#), which on August 10th started trading under the ticker "JOBY" after combining with Reinvent Technology Partners, a SPAC run by LinkedIn co-founder Reid Hoffman and Zynga founder Marc Pincus.

Both Archer and Joby are at least a few years from picking up their first passengers, but the Advanced Air Mobility sector has minted its first billionaire: Joby Aviation founder and CEO



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JoeBen Bevirt. Just one day after the first share was officially traded on the New York Stock Exchange, the price closed at \$10.90, giving the company a market capitalization of \$6.8 billion, and Bevirt, 47, a fortune worth \$1.08 billion given his 98.7 million shares.

Why is this relevant to our industry? Well, simply put, we now have companies developing non-traditional aerial platforms with **valuations over a billion dollars**, and that creates a **snowball effect** that should attract more and more investors to a sector that just a few years ago was considered science fiction. <https://www.commercialuavnews.com/infrastructure/the-billion-dollar-club-archer-and-joby-go-public>

SoCal county flies drone missions against disease-spreading mosquitoes Bruce Crumley - Sep. 10th 2021 DRONES FOR GOOD



For the second straight year now, officials with Orange County's Mosquito and Vector Control District have loaded their drones with insecticide payloads for missions to exterminate mosquitoes while in their larval state. Their major zone of activity is the Harriett Wieder Regional Park in Huntington Beach, which is located amid large areas of

wetlands that provide ideal reproduction conditions for the pests. The main purpose of the aerial assault is to reduce the risk of diseases spread by mosquitoes – particularly West Nile virus, which has become an increasing concern in Southern California in recent years.

The craft are loaded with up to 20 lbs. of VectoBac GS grains. They contain bacteria whose strength has been calibrated to prevent the insect's larva from developing while posing no threat to other life forms. This year is the second the Mosquito and Vector Control District has flown drones on missions against mosquitoes, and the effort is already proving worthwhile.

Reports [say](#) although the region's mosquito season runs from March to sometime in October, there has been **no detection** of West Nile virus in animals or people up to September 3. Tests on dead birds, which are usually a reliable gauge of the disease's presence and spread, have thus far turned up no positive cases. Only 22 samples taken directly from mosquitoes contained the virus. <https://dronedj.com/2021/09/10/socal-county-flies-drone-missions-against-disease-spreading-mosquitoes/>



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French draft law eyes police drone video to battle reckless urban motorcycle rallies [Bruce Crumley](#) - Sep. 10th 2021



A pair of conservative parliamentarians are readying the law to battle what's known in France as "rodéos urbains." Those involve a number of youths racing, doing wheelies, or performing riding stunts that are not only dangerous on their own but especially risky to unaware passersby. This summer, two people who happened to be in the wrong place at the wrong time were killed by drivers who lost control of their bikes.

Police broke up around 400 of the gatherings in 2019; in 2020 those jumped to more than 870. Some estimates put the total number of the flash jamborees at more than **4,614 annually**.

Though the 2018 legislation inflicts maximum penalties of a year in prison and \$17,737 in fines, the problem continues to grow. Car chases of fleeing youths – which only increase the danger for nearby pedestrians that cops are seeking to eliminate in the first place – have been formally discouraged.

To address that, French legislators now want to equip police with drones that can spot and video the reckless motorcycle gatherings and capture images of license plates and people on the vehicles. Once sufficient footage of perpetrators is shot, units can slowly roll in to put a relatively calm end to the event – and wait for identification information permitting suspects to **be arrested elsewhere**. <https://dronedj.com/2021/09/10/french-draft-law-eyes-police-drone-video-to-battle-reckless-urban-motorcycle-rallies/>

Archer announces eVTOL vertiport partnership and a deal with the USAF Loz Blain September 07, 2021



The Maker uses 12 electric props, the front six of which are capable of tilting forward for efficient winged flight

With its planned SPAC merger just a week away, eVTOL air taxi company Archer has announced a new deal with the US Air Force, a vertiport partnership with Reef, and a preliminary win in its court battle with Wisk over allegedly stolen designs.

Three months after publicly [pulling the covers off its full-scale two-seat air taxi prototype](#), Palo Alto's Archer is steaming towards the New York Stock Exchange, hoping to follow Joby Aviation down the



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yellow brick road to public listings and multi-billion dollar valuations through a merger with the Atlas Crest Investment Corp, which exists purely for the purposes of backdoor share market entry.

<https://newatlas.com/aircraft/archer-afwerx-reef-legal/>

13Sep21

Notify & Fly: Aloft Launches New Capability for B4UFly App Miriam

McNabb September 12, 2021 by DRONELIFE Staff Writer Ian M. Crosby



[Aloft](#) (formerly Kittyhawk) has announced today the introduction of the new Notify & Fly feature for [FAA's B4UFLY app](#) on iOS and Android. The new feature provides users with a simple and easy way to let other drone pilots know that they are flying in the area

Whether in the hands of hobbyists, commercial pilots or first responders, utilizing **Notify & Fly** will contribute to the overall safe integration of drones into the national airspace by increasing situational awareness, without sacrificing privacy.

Aloft's work on B4UFLY over the last **two years** has informed their thinking into how drone pilots want to engage with the airspace and its many stakeholders. Since the [relaunch of the app in August of 2019](#), they have powered over 13 million searches of the airspace and are now averaging approximately 800K searches per month. The app also sees thousands of crowdsourced submissions every month, half of which are users looking to announce their flight intention. In the initial Web-only test, more than 200 submissions were received in a limited testing period.

To make use of the new Notify & Fly feature, users need only update the B4UFLY app on their phone. Navigating to the main map screen will display the Notify & Fly icon. From there, users can choose whether they are flying as a commercial operator, recreational pilot or first responder. More information on how to use Notify & Fly can be found in the video [here](#). <https://dronelife.com/2021/09/12/notify-fly-aloft-launches-new-capability-for-b4ufly-app/>

Las Vegas partners with Airspace Link to provide a digital infrastructure for drone operations September 10, 2021 Jenny Beechener UAS traffic management news



The City of Las Vegas has launched a new FLYSAFE program in partnership with drone mapping solution provider Airspace Link powered by its AirHub platform. This program will enable drones operating in the city to fly safer today while paving the way for



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advanced commercial operations at scale.

Airspace Link will work with the City of Las Vegas to integrate their local geospatial information into the AirHub platform. This will enable drone pilots to be aware of potential hazards and risks so they can plan and execute safer missions.

Airspace Link is also an FAA-approved provider of Low Altitude Authorization and Notification Capability (LAANC), enabling drone pilots to obtain authorizations for flights within controlled airspace through the AirHub platform. The platform combines the FAA's rules and regulations of the airspace, the City's own local advisories and ground-based infrastructure datasets, and Airspace Link's additional risk datasets and scoring models, to ensure safer and compliant drone flights. <https://www.unmannedairspace.info/latest-news-and-information/las-vegas-partners-with-airspace-link-to-provide-a-digital-infrastructure-for-drone-operations/>

Austria issues tender for development of national unmanned traffic

management system September 13, 2021 Jenny Beechener UAS traffic management news



Austrian air navigation service provider Austro Control has issued a tender for the procurement of a traffic management system for unmanned aircraft systems to manage the country's growing number of drone operations.

With the new EU regulation, framework conditions have been created that enable orderly and safe growth for the drone sector. The core of the new regulation is the registration requirement for drone operators and pilots. So far, **24,000** drone operators have registered via the Austro Control drone platform "dronespace.at" and **36,000** pilot's licenses have been issued.

For the safe operation of drones in the future, a redefinition of the airspace and a separate traffic management system are required. In a first stage, this is intended to transmit drone flight plans, identify drones, warn of blocked airspaces and allow air traffic control to allow drones to enter special airspaces. Subsequently, an integrated airspace is to be developed at European level under the umbrella term "U-Space", in which all air traffic participants – manned or unmanned – can travel in a coordinated and safe manner.

<https://www.unmannedairspace.info/uncategorized/austria-issues-tender-for-development-of-national-unmanned-traffic-management-system/>



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“It is time that we enable BVLOS operations” – Tom Walker, DroneUp September 10, 2021 Philip Butterworth-Hayes Commentary



What can we all do to help the Federal Aviation Administration (FAA) enable beyond visual line of sight drone operations? That was the question posed by DroneUp’s Tom Walker at a joint session with Walmart’s Rachel Griffin at the 2021 Commercial UAV Expo in Las Vegas.

In a keynote speech, he said: “We can conduct statistical analyses to demonstrate how safe it is to fly UAS in low altitude airspace. Our team is wrapping up a month’s long study that will precisely show that.

“We can share, with the industry and the FAA, data collected during training and daily operations, which can inform the standards developed for operating commercial UAS at scale.

“We can develop and standardize training and document thorough operating procedures that ensure the highest achievable levels of safety.

“We can help define “acceptable risk.” We can no longer let perfect get in the way. If we try to make safety a certainty, we will never make progress.

“We must level the playing field. The largest players, with the deepest pockets, should not be the only voices influencing new regulatory and compliance requirements.

“It is time to start making regulatory decisions based on data, not on the opinions of the loudest voices in the room.

“We are all part of a rapidly emerging industry. No “one” company will make it successful. It will require all of us. BVLOS, long-range delivery, AAM, and what we have yet to imagine. It can all be achieved efficiently through industry collaboration.”

<https://www.unmannedairspace.info/latest-news-and-information/it-is-time-with-measured-and-performance-based-methodologies-that-we-enable-bvlos-operations-tom-walker-droneup/>

Future flight challenge UK Research and Innovation

This challenge is investing up to **£125 million** to develop greener ways to fly, such as all-electric aircraft and deliveries by drone, by advancing electric and autonomous flight technologies. The investment is matched by **£175 million** from industry.



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The challenge aims to bring together technologies in electrification, aviation systems and autonomy to create new modes of air travel and capability. It will:

- create the aviation system of the future
 - increase mobility, improve connectivity, and reduce congestion for people across the UK
- advance electric and autonomous flight technologies to help the UK reach its net zero target
 - drive technology investment to the UK by increasing UK manufacturing and service opportunities.

Cirium is leading the project, one of over 40 in the UK Research and Innovation (UKRI) Future Flight Challenge program. The project has a multi-disciplined consortium in UTM solutions, including; Anra Technologies, Neuron Innovations, Distributed Avionics, University of Southampton and Connected Places Catapult.

<https://www.ukri.org/our-work/our-main-funds/industrial-strategy-challenge-fund/future-of-mobility/future-flight-challenge/> <https://www.commercialdroneprofessional.com/drone-project-takes-off-with-share-of-30-million-uk-government-grant/>

ZALA’s First Hybrid UAV Performs 12-Hour Flight September 13, 2021 News



Hybrid UAV ZALA 421-16E5G performed a flight which lasted more than **12 hours and covered more than 1,130 kilometers.**

Two flight crews practiced high speed communications, control systems and over-the-horizon control points located in different regions of **the Russian Federation** where the UAV operators are located up to **500 kilometers away from the launch site.** The latest ZALA developments in navigation and information processing were tested.

The new onboard visual navigation system from satellites is in a closed circuit of the aircraft, which allows performance of tasks in complete radio silence as well as providing protection against electronic warfare. The system proved to be much more accurate than the inertial navigation system.

The new airborne intelligent processing system (AIVI) works in passive mode providing automatic detection and recognition of objects from several sensors which cover the entire lower hemisphere of the UAV (360 degrees). It provides up-to-date information on the number



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and location of objects and changes in the situation. This system allows increasing the area of inspection by 30 times, compared with regular means of detection, eliminating the human factor. https://uasweekly.com/2021/09/13/zalas-first-hybrid-uav-performs-12-hour-flight/?utm_source=rss&utm_medium=rss&utm_campaign=zalas-first-hybrid-uav-performs-12-hour-flight&utm_term=2021-09-13

Brussels Airport tests prohibited drones to reduce bird risk to airplanes Bruce

Crumley - Sep. 13th 2021



In normal times, flying prohibited drones in an airport space is as unthinkable as it is insane. Right now, however, the craft are not only buzzing around the runways of Brussels' main airport but are central to a test to decrease the risk of bird strikes.

Brussels Airport and its traffic control service provider Skeyes are currently running trials using drones around normally prohibited sections of runway airspace to see if they can significantly lower the threat of bird-plane collisions. The testing, which began September 9, involves the craft flying in more remote sections that are harder for the habitual car patrols to reach. Dry runs earlier this year found uncrewed aerial vehicles to be effective in identifying and flushing birds out of grassy margins beside runways. The current models are also outfitted with **speakers** that can blast screeches from [birds of prey](#) to enhance the fear response.

Brussels Airport, which covers 12.5 square kilometers, normally relies on cars to patrol the edges of runways between takeoffs and keep them clear of animal life. But given the wide area involved, officials have turned to telecom service provider [Citymesh](#) which also offers drones to detect, monitor, and chase gathering birds from the outer areas.

The typically prohibited drones are flown around the airport remotely, **in beyond visual line of sight mode**, and provide real-time HD video to controllers in the company's headquarters. Flight of the craft is carefully planned around the schedules of outbound passenger planes to ensure that the UAV can effectively decrease the risk of bird strikes to airliners.

<https://dronedj.com/2021/09/13/redefining-dangerous-brussels-airport-tests-prohibited-drones-to-reduce-bird-risk-to-airplanes/>



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Maryland UAS Research Director position open

University of Maryland UAS Test Site
44181 Airport Road | California, MD 20619

<https://ejobs.umd.edu/postings/86627> This position will also have a direct tie-in to the new SMART building and MATRIX Lab. <https://usmsm.umd.edu/smart-progress>.

Matt Scassero, Director
Office 301.862.7824 option 1 | Cell 240.925.3511
mscasser@umd.edu | www.uas-test.umd.edu | @UMDUASstest

14Sep21

Original Skydio Video Series Tells the Stories of First Responders in Critical

Missions Miriam McNabb September 13, 2021



If you've ever wondered exactly how drones get used during a public safety mission, the new [Skydio video series](#) is worth watching. In Episode 1, The Fire, a 3-minute video explains exactly how and in what situations a [Skydio drone](#) is deployed by first responders showing the outputs, explaining the sensors used, and describing the use by various stakeholders. Through the story

of a chemical fire, the short film provides real world context for drone technology in public safety.

Skydio's autonomous drones offer a unique tool for first responders, lowering the cognitive load required to fly less autonomous platforms – a critical advantage in a crisis. In the last few years, U.S.-based Skydio has joined the First Responder and public safety community: as a DRONERESPONDERS partner and corporate sponsor, and through their [partnership with Axon](#), a top provider of technology for law enforcement.

Check out [Episode 1: The Fire here](#) to see a drone in action under the challenging conditions first responders face every day. <https://dronelife.com/2021/09/13/original-skydio-video-series-tells-the-stories-of-first-responders-in-critical-missions/>



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Defense Digital Service, Air Force Research Lab Plan Counter-UAS Tech

Transition Angeline Leishman September 13, 2021 C4ISR, News, Technology



The Defense Department's digital service group plans to transition its small, unmanned aircraft system sense-and-detect platforms to the Air Force Research Laboratory's Negation of Improvised Non-State Joint Aerial (NINJA) system program by Sept. 30.

The technology transfer effort reportedly follows a memorandum of understanding signed between the Defense Digital Service and AFRL in April for collaborative work in the counter-sUAS area.

Acting DDS Director [Katie Olson](#) told the publication that the agency has tested and delivered technologies to military personnel for their drone threat detection and tracking activities since early 2020.

"Transitioning these capabilities to AFRL enables their evolution and growth and allows them to continue to support and modernize the DOD defensive posture," Olson added.

<https://www.executivegov.com/2021/09/defense-digital-service-air-force-research-lab-plan-counter-uas-tech-transition/>

SpaceX launches 51 Starlink internet satellites into polar orbit

WILLIAM HARWOOD
SEPTEMBER 14, 2021 CBS NEWS

The launch marked a major milestone for SpaceX: the project's **first flight** to an orbit **around Earth's poles** using new internet beacons featuring satellite-to-satellite laser communications links to minimize time lost relaying data through ground stations.



A SpaceX Falcon 9 rocket using a first stage making a record-breaking 10th flight blasts off from Vandenberg Space Force Base, boosting 51 Starlink internet satellites into polar orbit. SPACEX

Gwynne Shotwell, SpaceX president and CEO, said at a recent conference, "By putting more capacity in space, we're really looking forward to connect those that are very difficult to connect, the three to five percent where fiber just does not make sense."



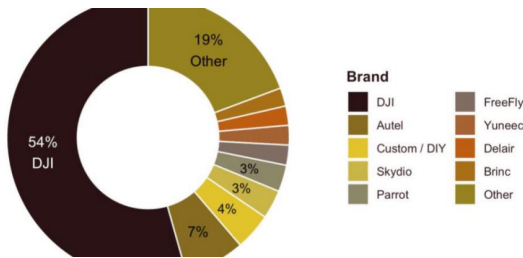
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After propelling the vehicle out of the dense lower atmosphere, the first stage fell away, flipped around and plunged back to Earth, landing on a SpaceX dronship to chalk up the company's **91st successful booster recovery**, its 68th at sea.

With Monday's launch, **SpaceX has put 1,791 Starlinks into orbit**. More than 1,400 of them were thought to be fully operational going into the latest flight.

Operating in multiple orbital planes, the Starlink satellite system is designed to eventually bring relatively **high-speed internet to any point on the planet**, routing data to and from small user antennas and terminals. <https://www.cbsnews.com/news/spacex-launches-51-starlink-internet-satellites-into-polar-orbit/>

2021 DJI MARKET SHARE TAKES A HUGE HIT ON COMMERCIAL SIDE September 13, 2021 Sally French 0 News



DJI might not be the behemoth it once was — at least on the commercial side. The 2021 DJI market share of enterprise drone products saw a huge nosedive this year, down 15 points from 2020 to 54%.

Still, **54%** is still a majority market share and — relative to most other tech industries — **still enormous**. But it's well below the market share figures north of 70% that DJI has seen in year's past. The report was based on an online survey that garnered over 1,800 respondents, representing 39 industries across 110 countries, and a series of qualitative interviews.

It's hard to say if there is even a true "runner-up," as brands lumped under "Other" rose from 10% of purchases in 2020 to 19% today. That could be good news for the latest crop of [American drone companies](#) springing up, as there are increasingly more small companies getting into niche markets with mission-specific drones popping onto the scene. In fact, U.S. drone manufacturers rose 9 points from last year's data to take up 16% of drone sales, while China fell from 77% to 64%.

American drone companies to note of late include companies like Montana-based [Skyfish](#) that have designed a drone to carry Sony cameras, or Los Angeles-based [A2Z, which makes the RDSX delivery drone](#). There are **countless others**.



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Commercial Drone Brand Market Share by Country of Origin

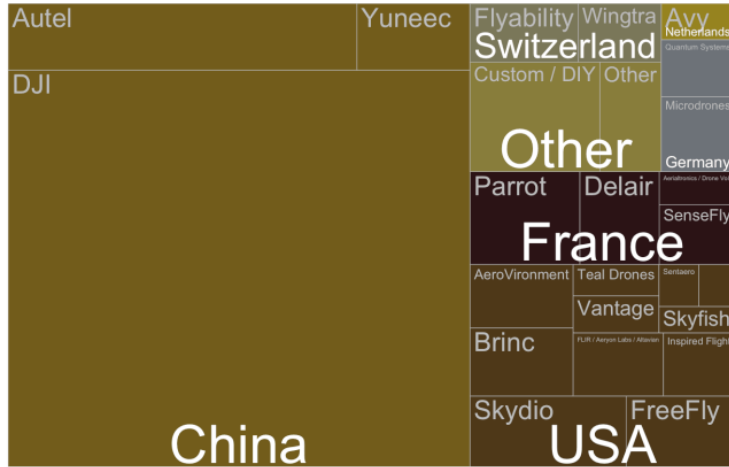


Image courtesy of DroneAnalyst

Other countries that notably stand out include France, which is home to one of the first players in the consumer drone space, Parrot (though Parrot has since pivoted to largely focus on the enterprise market) and [Switzerland](#), which is increasingly growing as a hub for drones.

<https://www.thedronegirl.com/2021/09/14/2021-dji-market-share/>

[9/14/2021-dji-market-share/](https://www.thedronegirl.com/2021/09/14/2021-dji-market-share/)

15Sep21

BAE, Malloy team to offer T-650 heavy-lift UAV Christopher Columbus September 14, 2021



BAE Systems has joined forces with UK unmanned air vehicle manufacturer Malloy Aeronautics to design and market an all-electric vertical take-off and landing design capable of carrying a **661lb** payload.

With a maximum speed of 75kt and 16.2nm range at maximum take-off weight, the “uncrewed” platform could be employed for tasks including resupply, anti-submarine warfare, maritime search and rescue and casualty evacuation.

In addition to its military potential, Malloy chief executive Oriol Badia points to the T-650’s suitability for the “commercial, security and humanitarian arenas, and civilian applications”.

A flying testbed for the T-650 is currently in the design phase, with Holmes expecting this to be flown at BAE’s Warton site in Lancashire from the second half of 2022. Customer vehicles could be available to support operational evaluation activities from 2023, he says.

<https://gettravelfares.com/bae-malloy-team-to-offer-t-650-heavy-lift-uav/>



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DHS Tasks Texas-Based Small Business to Develop Small Drone Tracker in Urban

Canyons Angeline Leishman September 14, 2021 C4ISR, Contract Awards, News



The Department of Homeland Security (DHS) has awarded Texas-based small business [Cobalt Solutions](#) **\$750,000** to develop its [Urban Canyon Detection Tracking and Identification of Small Unmanned Aerial Vehicles](#) system.

The Small Business Innovation Research Phase II award tasks Cobalt to keep working on a system that uses commercial 5G signals to find adversarial small UAVs in urban canyon environments. The award follows a Phase I effort where the company showed the feasibility of its 5G Passive Radar UAS Tracking and Targeting sensor.

Under Phase II, Cobalt must produce a prototype after 24 months and demonstrate its tracking system to potentially secure a Phase III award and eventually commercialize the technology.

“As more 5G mm Wave transceivers are deployed in city centers, the ability to detect and track drones in complex urban geometries becomes easier, while not contributing to an already crowded radio frequency spectrum,” explained Jeff Randorf, a DHS Science and Technology engineering adviser and SBIR topic manager. <https://www.executivegov.com/2021/09/dhs-tasks-texas-based-small-business-to-develop-small-drone-tracker/>

Rapid Expansion of the Use of UAVs By Global Air Forces Continues Apace

September 15, 2021



The diversification of unmanned systems into new roles traditionally filled by manned systems is expected to gather pace over the next decade.

The rapid expansion of the use of unmanned aerial vehicles by air forces around the world is continuing apace. As of 2021 over **4,000** so-called Group 3-5 UAVs—systems with a maximum takeoff weight more than 55 lb.—are in service, with Aviation Week Network figures showing that figure increasing to over **5,200 by 2031**, an increase of 30% over the next 10 years.

While the advantages of employing unmanned aircraft in specific mission areas such as surveillance are now widely acknowledged, the roles are beginning to shift and expand. Target drones—among the first unmanned systems to enter service in large number—now represent only 10% of the global fleet, and this share is expected to fall further over the coming decade.



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Even the share of dedicated C4ISR UAVs, which represent most unmanned aircraft currently in service, is expected to fall from around 55% today to 46% by 2031.

<https://aviationweek.com/defense-space/rapid-expansion-use-uavs-global-air-forces-continues-apace>

Dufour, Swiss Air-Rescue Rega to Partner on eVTOL Air Ambulance Flying Staff 17 hrs ago



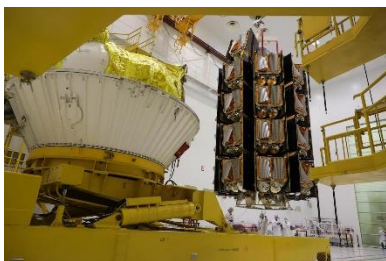
The piloted, hybrid Aero3 is designed for emergency medical services and patient transport. It uses a unique tilt-wing design. In its initial stages, Dufour will allow Rega—a nonprofit that provides emergency medical assistance to areas of Switzerland—to give input on the development of the eVTOL aircraft to better suit its air-rescue needs. Dufour’s previous project, the Aero2, was an **unmanned**, smaller version of the aircraft that was test-flown last year.

“The collaboration with Rega will challenge Dufour Aerospace and advance our product development,” said Dufour CEO Thomas Pfammatter. “... The Aero3 will meet the requirements for demanding patient transport, combining vertical take-off with sufficient load, high speed, and range. Aero3 will be more efficient, less expensive, and quieter than today’s helicopters and will integrate seamlessly with existing infrastructure and systems.”

Dufour and Rega affirmed the importance of their cooperation to revitalize advanced air mobility and its availability to patients. <https://aviationweek.com/aerospace/urban-unmanned-aviation/swiss-air-rescue-help-dufour-develop-ems-evtol>

Russian rocket ready for launch with 34 more Florida-built OneWeb satellites

September 14, 2021 Stephen Clark



Thirty-four OneWeb satellites, mounted on their deployment fixture, are raised onto a Fregat upper stage at the Baikonur Cosmodrome during pre-launch preparations.

A Russian Soyuz rocket is poised for lift off Tuesday from Kazakhstan with another 34 internet spacecraft for OneWeb, the company’s 10th launch since deployment of the satellite network began in 2019.



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Launch is set for 2:07:19 p.m. EDT (18:07:19 GMT) Tuesday to carry OneWeb's next 34 satellites into orbit. A successful launch would expand OneWeb's fleet to **322** satellites, **second in size only to SpaceX's** constellation of Starlink internet satellites

OneWeb, backed by the British government and the Indian telecom company Bharti Global, plans to launch **648** small internet satellites, including spares, to provide broadband connectivity to customers around the world.

Each OneWeb satellite is about the size of a mini-fridge. The spacecraft are built by OneWeb Satellites, a joint venture between OneWeb and Airbus, in a factory just outside the gate of NASA's Kennedy Space Center in Florida.

The satellites, each fitted with a xenon-fueled ion thruster, beam broadband internet signals to users on the ground, at sea, or in the air, providing high-speed, low-latency connectivity for consumers, large companies, and governments.

<https://spaceflightnow.com/2021/09/14/russian-rocket-ready-for-launch-with-34-more-florida-built-oneweb-satellites/>

Wingcopter Drones Speed Up Blood Sample Transport in Germany September 14, 2021 News



26 kilometers (16 miles) between Greifswald and Wolgast – that is the distance over which Wingcopter drones recently transported blood samples in the Northeast German federal state of Mecklenburg-West Pomerania. The flights were carried out by Greifswald University Medical Center in cooperation with DRF Luftrettung and [Wingcopter](#) as part of the MV|LIFE|DRONE Challenge project of the hospital's Department of Anesthesiology. The project is funded by the German Federal Ministry of Health and the Ministry of Energy, Infrastructure and Digitalization of Mecklenburg-West Pomerania and intends to improve structures of regional emergency care by integrating Unmanned Aircraft Systems into the rescue chain and emergency medical transports.

The flights beyond the pilots' visual line of sight carried a pneumatic tube including 250 grams of blood samples. The Wingcopter completed the 26-kilometer route in an average of 18 minutes, nearly **twice as fast as ground-based transport**. The use of Wingcopter drones could thus significantly speed up emergency medical care in rural areas and help save lives. In the event of a blood transfusion being necessary at short notice, for example, blood samples from Wolgast District Hospital must be transported to Greifswald University Hospital for analysis to



UAS and SmallSat Weekly News

determine the appropriate donor blood. https://uasweekly.com/2021/09/14/wingcopter-drones-speed-up-blood-sample-transport-in-germany/?utm_source=rss&utm_medium=rss&utm_campaign=wingcopter-drones-speed-up-blood-sample-transport-in-germany&utm_term=2021-09-15

Canadian police search locates missing elderly man with DJI Matrice 300 drone

Bruce Crumley - Sep. 15th 2021



Police in the Ontario city of Kingston [said](#) they'd successfully located the man in a densely wooded area only about three hours after they'd begun their search. A family member had reported the 80-year-old as missing on Sunday, and Kingston began pinging his telephone to determine his location as being somewhere around the city's rowing club. After being told by witnesses the man had been seen heading off into an overgrown area nearby, a localized search began at 7 p.m.

By 10 p.m., cops on the ground successfully located the man – though only after getting some critical help by hi-tech eyes in the sky. Shortly after the drone was flown above the wooded area, its pilot had located the missing man and began directing colleagues toward his exact location on foot. Once removed from the brush and cleared by medical workers, he was released to his family and returned home.

In July, authorities in North Wales found an 84-year-old man who'd [wandered off](#) into an area of very tall grass and become disoriented. A full **18 hours** after he'd last been seen, cops flying a Matrice RTK spotted the man that helicopters had repeatedly missed. **“Without that drone**, his daughter said once he'd been saved, **“he didn't stand a chance.”** <https://dronedj.com/2021/09/15/canadian-police-search-locates-missing-elderly-man-with-dji-matrice-300-drone/#more-67360>

16Sep21

DSEI 2021: UK earmarks 2023 for first Mosquito 'loyal wingman' flight

Gareth Jennings 15 SEPTEMBER 2021



The United Kingdom expects to fly the Mosquito 'loyal wingman' it is developing as part of its wider Future Combat Air System (FCAS) for the first time in national airspace in 2023.

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In his keynote speech to the DSEI defence exhibition in London on 15 September, the Chief of the Air Staff, Air Chief Marshal Sir Mike Wigston, said that the Mosquito unmanned aircraft being developed as a loyal wingman to the Tempest future fighter will fly in UK skies by the end of 2023.

Being developed under the Lightweight Affordable Novel Combat Aircraft project, the Mosquito is part of the wider FCAS that has the Tempest optionally piloted combat aircraft at its core. Other elements will include Alvina swarming drones and other legacy platforms networked in the future battlespace by means of a Combat Cloud. The Royal Navy is reported to be advancing its own loyal wingman called Vixen.

For the loyal wingman role, the Mosquito would be launched from airfields, Airbus A400M 'mother ships', or aircraft carriers, and serve as force multipliers to the Tempest. They will be able to perform a range of roles, such as weapons carriers and decoys and may even serve as weapons themselves. <https://www.janes.com/defence-news/news-detail/dsei-2021-uk-earmarks-2023-for-first-mosquito-loyal-wingman-flight>

Texas-based program to train EMS drone pilots in emergency response missions

Miriam McNabb September 15, 2021 by Jim Magill



Emergency medical personnel in Texas will soon be able to deliver life-saving medicines and equipment via drones to victims of emergencies or disasters, thanks to a training program announced last month by Draganfly.

The training program got underway in August in Spring Branch, Texas, a city northeast of San Antonio. The training comprises the first phase of a multi-phase program launched by Draganfly and global supply chain company Coldchain Delivery Services, to **incorporate drone intelligence** gathering and deliveries into the state's **emergency management systems**.

The program, which will eventually be expanded to include firefighters and search and rescue teams in addition to emergency medical personnel, will instruct first responders in the use of drones to transport critical equipment and medical supplies and to transmit data to emergency and disaster relief operations centers. <https://dronelife.com/2021/09/15/texas-program-will-train-ems-drone-pilots-in-delivery-situational-awareness-for-crisis-response/>



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17Sep21

ZIPLINE'S OKEOMA MORONU SHARES GROWTH PLANS FOR DRONE

DELIVERY September 13, 2021 Sally French 0 Drone Girl Profiles, Q&A,



Meet Okeoma Moronu, Legal Counsel at Zipline, which is the world's first, national-scale, autonomous, instant drone delivery service. It specializes in using drones to bring lifesaving and critical medicine to the world's most difficult-to-reach places.

Okeoma Moronu joined Zipline in November 2019 as Legal Counsel, bringing with her more than 10 years of expertise working everywhere from Amnesty International and the United Nations to work in the aviation industry including a role at helicopter service provider CHC Helicopter. She has a law degree from Columbia Law School.



And just a year after joining Zipline, the company was named the [top drone delivery company of 2020](#) by Drone Industry Insights. Zipline operates on-demand drone deliveries of medical supplies to thousands of health facilities and home-delivery of health products.

Drone Girl: Given Zipline's position as currently the only drone delivery program operating at a national scale, what unique challenges does Zipline have?

Okeoma Moronu: As a pioneer in automated, on-demand delivery, we feel like we have a unique responsibility to set the tone for how this industry moves forward. Not just by setting a standard for safety and reliability, but also by demonstrating the incredible benefits this technology can have. We want to showcase the transformative impact instant delivery can have for systems, communities, and individuals around the world.

Drone Girl: I see a lot of companies doing one-off drone deliveries, like flying to a controlled group of people on a specific day for a limited time. How does that differ from the scale that Zipline operates on?

Okeoma Moronu: Zipline is the first and only automated, on-demand delivery service to operate at multinational scale. **To date, we've flown more than 13 million autonomous miles and nearly 200,000 flight hours. Today, we make a delivery every four minutes, and our total service area encompasses more than 2,500 healthcare facilities and 25 million people.**

At the same time, we are working to more than double this as we expand our services in Ghana and launch in Nigeria, Japan and the **United States** over the next year.

<https://www.thedronegirl.com/2021/09/17/okeoma-moronu/>



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Drone for Volcano Science: Black Swift Technology Creates UAS Observation Platform

Miriam McNabb September 16, 2021 by Ian M. Crosby



In a landmark for UAS operations, Black Swift Technologies is currently working on a project supported by the USGS, NASA and the Alaskan DOT for volcano observations, and is conducting some of the first [beyond-visual-line-of-sight](#) operations for UAS without visual observers or land-based radar.

Makushin Volcano, located on Unalaska Island, Alaska, is ranked within the highest threat category identified by the U.S. Geological Survey's National Volcanic Threat Assessment. The volcano's activity levels are monitored using a network of seismic stations and webcams installed on and around the volcano as well as visits by volcanologists to assess the summit region and sample gases emitted from the summit craters and hydrothermal areas on the flanks of the edifice. However, these surveys can potentially prove hazardous to field crews during times of unrest.



To mitigate this hazard, the USGS Volcano Hazards Program has collaborated with industry partners and NASA to develop a new volcano observation platform aboard an Unmanned Aircraft System. It is based on the Black Swift S2 UAS with a 3-m wingspan and 2.3-kg

payload capacity. It can approach active volcanoes from safe distances of over 30 km while climbing to summit elevations of over 3000 m and remain airborne for approximately **90 minutes**.

Outfitted with a backup satellite link and real-time data telemetry back to the base station, the aircraft is built to fly beyond visual line of sight during volcano observation missions.

<https://dronelife.com/2021/09/16/drone-for-volcano-science-black-swift-technology-creates-uas-observation-platform/>

Volocopter Explores LA Launch with New Urban Movement Labs

Partnership Kelsey Reichmann | September 16, 2021



The German urban air mobility company Volocopter announced a new partnership with Urban Movement Labs that will allow the company to explore launching its UAM vehicles in the U.S. market, the company announced on Sept. 15.

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Urban Movement Labs is collaborating with the Los Angeles Department of Transportation on the [Urban Air Mobility Partnership](#) which intends to identify challenges and solutions for integrating UAM into the city. The new partnership will give Volocopter insight when creating a policy framework to launch its UAM vehicles in Los Angeles.

Volocopter is developing a UAM ecosystem that includes an inter-city air taxi, VoloCity, a heavy-lift drone, VoloDrone, and an intra-city air taxi, [VoloConnect](#). The company is working on **concurrent certification** from the European Union Aviation Safety Agency and the U.S. Federal Aviation Administration which would allow the company to launch in both markets. Volocopter recently received a [prerequisite approval](#) from EASA to begin producing its electric air taxi which took its [first public flight](#) in France at the Paris Air

Forum. <https://www.aviationtoday.com/2021/09/16/volocopter-explores-la-launch-new-urban-movement-labs-partnership/>