UAS and SmallSat Weekly News

Contents

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

12Nov22

Amazon previews its new delivery drone, the MK30 Brian Heater@bheater November 10, 2022

Following this morning's debut of the Sparrow bin-picking robot, Amazon just unveiled MK30, the latest iteration of its delivery drone. The system is the successor to the MK27-2, which is set to debut limited deliveries to residents in Lockeford, California and College Station, Texas.

The MK30, which is set for a 2024 debut, is both smaller and lighter than the earlier version and able to withstand harsher temperatures and a broader range of weather conditions. Another key element here is making things quieter. Drone noise has been one of the most anticipated complaints about bringing these systems into residential settings. The system maintains the same basic hexacopter foundation as its predecessor.

Amazon writes: Reducing the noise signature of our drones is an important engineering challenge our team is working on. Our drones fly hundreds of feet in the air, well above people and structures. Even when they descend to deliver packages, our drones are generally quieter than a range of sounds you would commonly hear in a typical neighborhood. Prime Air's Flight Science team has created new custom-designed propellers that will reduce the MK30's perceived noise by a further 25%. That's a game-changer we're very excited about.

Also on-board are new safety systems designed to avoid a wide range of different obstacles, from fellow drones to trees to people and pets. "While it's impossible to eliminate all risks from flying, we take a proven aerospace approach to design safety into our system," the company writes. "As always, our newest drone will go through rigorous evaluation by national aerospace authorities like the Federal Aviation Administration to prove its safety and reliability."
https://techcrunch.com/2022/11/10/this-is-amazons-new-delivery-drone-the-mk30/?guccounter=1

XQ-58A Valkyrie UAS Demonstrates Encrypted Communications & Autonomous Landing Mike Ball / 10 Nov 2022

Kratos Defense & Security Solutions has confirmed that it has recently completed a successful flight of its production XQ-58A Valkyrie aircraft for the Block 2 Valkyrie Maturation Program.

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

The program team includes the Air Force Research Laboratory (AFRL), Yuma Proving Ground, and Kratos.

The test flight performed at Yuma Proving Ground proved XQ-58A's extended capabilities by flying longer, higher, at a heavier mission weight, and at a longer range than the platform has previously been approved for (based on prior government range limitations) and demonstrated. This flight was conducted with another of the Block 2 Valkyrie aircraft produced in the company-initiated 12-lot build and was the first flight for this tail number.

The flight was conducted with encrypted communications with redundant radios/communications packages for range and operational missions remote from government ranges. For the final test point, the aircraft navigated to the landing site in a simulated loss of communications scenario. It landed within the target zone, demonstrating key autonomous capability for the end of mission phase of flight and recovery of the aircraft without RF comms. This capability will help mitigate the possibility of enemy detection and tracking of RF comms emissions as the system returns to "base".
https://www.unmannedsystemstechnology.com/2022/11/xq-58a-valkyrie-uas-demonstrates-encrypted-communications-autonomous-landing/

Skye Air Mobility raises $1.7 million to fuel growth November 10, 2022 News

Skye Air Mobility, India's leading drone delivery technology company, has announced the successful completion of its $1.7 million Seed Round organized by Chiratae Ventures, Lead Angels, O2 Angels, Agility Ventures, Lets Venture, and notable investors including Rajeev Chitrabhanu, Ankit Nagori, Varun Alagh, Gautam Badalia, Ayush Lohia.

The investment will be used for faster deliveries, reduction in carbon emission, reduced cost, and increased accessibility to locations that are difficult to reach by road or where there is no connectivity at all.

India is an attractive market for drone start-ups as the country is very progressive with respect to the integration of drones into everyday life. 2021 has been a promising year for UAVs as it

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

created an optimistic environment with the introduction of new drone rules. The Indian drone delivery industry's potential stands at $18 Billion and is further growing at an exceptional growth rate. https://uasweekly.com/2022/11/10/skye-air-mobility-raises-usd-1-7-million-to-fuel-growth/?utm_source=rss&utm_medium=rss&utm_campaign=skye-air-mobility-raises-usd-1-7-million-to-fuel-growth&utm_term=2022-11-11

Dronehub receives $500k from the world's largest incubator in the sector

November 9, 2022 News

Dronehub – the European leader in drone-in-a-box solutions – received $500,000 as a finalist in the American GENIUS NY program, which is the world's largest incubator for startups in the UAV, IoT and robotics industries. In early November, GENIUS NY announced the winners of this year's edition of its international competition.

The GENIUS NY program is the world's largest business accelerator competition focused on unmanned systems, data to decision and IoT. The 6th edition of the competition takes place in 2022. Five companies were selected as the winners: Dronehub (Poland), Archangel Imaging (Great Britain), AVSS (Canada), Fusion Engineering (the Netherlands) and Wonder Robotics (Israel). Each winner received $500,000 as well as full support in the business development in the US: free office space with full equipment in Syracuse, NY, business workshops and training, access to consultants and specialists, assistance in fundraising, legislation and marketing in the US, and free participation in selected conferences and events.

Dronehub representatives have been present in the USA at the invitation of GENIUS NY since August. https://uasweekly.com/2022/11/09/dronehub-with-500k-usd-from-the-worlds-largest-incubator-in-the-sector/?utm_source=rss&utm_medium=rss&utm_campaign=dronehub-with-500k-usd-from-the-worlds-largest-incubator-in-the-sector&utm_term=2022-11-10

Aerial Vantage Receives FAA BVLOS Waiver for Drone-Based Precision Agriculture November 10, 2022 News

Aerial Vantage has received Federal Aviation Administration approval of a waiver allowing it to conduct advanced remote sensing missions using unmanned aircraft systems over a large ranch in Florida.

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

The Part 107 beyond visual line of sight waiver will allow Aerial Vantage to fly as high as 1,000 feet with visual observers ensuring cleared airspace exists beyond the view of the remote pilot.

The waiver was developed in collaboration with aircraft partner Censys Technologies and obtained with assistance from the North Carolina Department of Transportation through its participation in the FAA's BEYOND program. The implications could be far-reaching once Aerial Vantage can reliably demonstrate safe operations under the waiver. While operations are currently restricted to flights over the company's partner ranch in Florida, Aerial Vantage intends to pursue agricultural, emergency response, and infrastructure missions in North Carolina as a BEYOND partner.

Flight operations under this waiver began in early October 2022 and are authorized for up to two years. https://uasweekly.com/2022/11/10/aerial-vantage-receives-faa-bvlos-waiver-for-drone-based-precision-agriculture-analytics/?utm_source=rss&utm_medium=rss&utm_campaign=aerial-vantage-receives-faa-bvlos-waiver-for-drone-based-precision-agriculture-analytics&utm_term=2022-11-11

Vertiport Testbed for European Urban Air Mobility Testing Inaugurated in Paris

November 10, 2022 News

Today, Groupe ADP, Skyports and Volocopter commissioned Europe's first fully integrated vertiport terminal for the urban air mobility (UAM) industry at the Pontoise-Cormeilles airfield. The launch of the terminal represents the start of a new era for urban air mobility, as the facility allows advanced testing of critical technology and passenger processes.

Urban air mobility is a new form of sustainable aviation that will provide regions and cities with an alternative form of transport for people and goods. Introducing a new form of mobility successfully requires industry-wide collaboration and the support of regulators and government bodies. The UAM ecosystem includes manufacturers of electric vertical takeoff and landing aircraft, physical and digital infrastructure providers, regulators, technology supply chain, cities, governments, and the public. The fully integrated testbed enables a variety of stakeholders to test technologies and procedures in diverse configurations in a real-life environment. The opportunity to test on a live airfield is both invaluable and essential to the development of the industry.

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

The testbed, designed by Skyports in collaboration with Groupe ADP, is aircraft agnostic and offers the entire ecosystem the chance to test and develop their technologies. Most importantly, it facilitates collaboration between the key ecosystem partners, including technology pioneers, regulators, and local partners such as the French Civil Aviation Authority, suppliers and airlines. https://uasweekly.com/2022/11/10/vertiport-testbed-for-european-urban-air-mobility-testing-inaugurated-in-paris/?utm_source=rss&utm_medium=rss&utm_campaign=vertiport-testbed-for-european-urban-air-mobility-testing-inaugurated-in-paris&utm_term=2022-11-11

Fruity Chutes Supports M2 Type Certification in United Safety Effort November 10, 2022 News

Fruity Chutes, the leading and longest-standing provider of parachute recovery systems for UAS, today announced their partnership with Matternet in achieving FAA Type Certification. Fruity Chutes provided essential safety components including shock cords, harnesses, and parachutes – namely, the drone-optimized Iris Ultralight parachute. The groundbreaking success marks Fruity Chutes as the first UAS recovery company to have a drone parachute complete the demanding four-year FAA evaluation process.

Fruity Chutes' recovery components were integrated with the M2 drone over a six-year collaboration between the two companies. To meet parachute recovery requirements, the combined 96" Iris Ultralight and M2 drone underwent third-party testing for ASTM F3322-18 standards, which requires flight testing of over 45 successful parachute deployments under varying conditions. Additionally, FAA Type Certification requires systems employing parachutes to complete anywhere from hundreds to thousands of flight hours without failure. The required hours double for systems without a parachute.

"This long process is about arguing your safety case to the FAA, and the parachute helps you make that case. It lowers the statistical probability of injuries, fatalities, and other accidents," said Gene Engelgau, founder and CEO of Fruity Chutes. https://uasweekly.com/2022/11/10/fruity-chutes-supports-m2-type-certification-in-united-safety-effort/?utm_source=rss&utm_medium=rss&utm_campaign=fruity-chutes-supports-m2-type-certification-in-united-safety-effort&utm_term=2022-11-11s

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

FAA allows Valmont utility inspection drones to fly BVLOS across US Ishveena Singh - Nov. 11th 2022

With drones making powerline inspections safer, more efficient, and cost-effective, the Federal Aviation Administration (FAA) has issued a new Part 107 Beyond Visual Line of Sight (BVLOS) waiver that would allow Valmont Industries to fly its drones across the United States at a moment's notice.

Valmont's utility arm, Valmont Utilities, is leading manufacturer of custom-engineered transmission and distribution poles. Since 2018, the company has been exploring the use of drone technology as an alternative to the manual inspection process. Today, a bulk of inspection work at Valmont is done using drones such as the DJI Matrice 300 RTK.

The new nationwide BVLOS waiver gives Valmont the ability to fly its diverse drone fleet for commercial inspections of utility lines without waiting for site-specific geographic approval from the FAA. The new waiver also opens the door for more advanced operations as the company moves toward a completely autonomous solution.
https://dronedj.com/2022/11/11/bvlos-drone-inspection-faa-us/

Archer and United Reveal Plans for First eVTOL Route in the U.S. Jessica Reed | November 10, 2022

Today, Archer Aviation and United Airlines announced what will be the first of many routes connecting airports to city centers. This first route will connect Newark Liberty International Airport (EWR) with the Downtown Manhattan Heliport in New York City. Archer's plan is to establish a network across the U.S. for its electric vertical take-off and landing (eVTOL) aircraft to provide urban air mobility services.

According to Archer's announcement, this proposed service between New York City and EWR is the first specific route that has been revealed in the eVTOL industry. "We look forward to continuing our collaboration with United and to working closely with state and local government leaders in the New York and New Jersey area as we bring this exciting new form of

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

transportation to life," remarked Adam Goldstein, Archer's Founder and CEO.
https://www.aviationtoday.com/2022/11/10/archer-united-reveal-plans-first-evtol-route-u-s/?oly_enc_id=7021F0632090D7B

13Nov22

War in Ukraine has displayed the power of the drone 12Nov2022

The noisy buzzing of the Iranian-made drones Russia has been using to smash power and water facilities in Ukraine is said to have earned them the nickname "flying lawnmowers of death". The large-scale deployment makes this not the first, but the biggest and most visible "drone war" the world has yet seen. The US has used drones in Iraq and Afghanistan in surveillance and counter-terrorist operations. They have featured in conflicts in Libya, Syria, and Ethiopia; Azerbaijan used them decisively against Armenian forces in Nagorno-Karabakh in 2020.

Military-use drones can be cobbled together from commercial products. A maritime drone that washed up in Crimea in September, similar to those later used to attack Russia's Black Sea fleet in Sevastopol, appeared to be equipped with a Canadian jet ski engine and a Soviet-era detonator. One unproven theory behind recent, mysterious thefts of dozens of roadside speed cameras in Sweden is that they ended up in homemade Russian drones in Ukraine.

Flows of such weapons are difficult to track. They are also a comparatively cheap way of acquiring airborne reconnaissance and combat abilities not just for poorer countries but for non-state actors such as militias or insurgent groups, terrorists, and organized crime.
https://www.ft.com/content/320b555e-bbf6-4cec-8873-f82904ca0334

Ukraine Launches Drone Attack on Russian Black Sea Fleet's Sevastopol Headquarters Eurasia Daily Monitor Volume 19 Issue: 166 John C. K. Daly *November 8, 2022*

In its most impressive operation yet, on October 29, the Ukrainian military launched a coordinated swarm of unmanned aerial vehicles and naval drones into Sevastopol, headquarters of the Black Sea Fleet. While the apparent level of damage was slight, the technological prowess of the attack on the highly

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

symbolic target led Russia to assert that the Ukrainian military had received foreign assistance before and during the operation.

The Russian Ministry of Defense (MoD) briefed journalists that the attack occurred at 4:20 a.m. on the morning of October 29 when nine UAVs and seven unmanned robotic naval drones traveled 100 miles from their Ochakiv launch point, near Odesa, to Sevastopol on the Crimean Peninsula, which Russia has occupied since 2014. The MoD asserted, "As a result of the operational measures taken by the ships of the Black Sea Fleet, all air targets were destroyed." https://jamestown.org/program/ukraine-launches-unprecedented-drone-attack-on-russian-black-sea-fleets-sevastopol-headquarters/?mc_cid=2832ba10be&mc_eid=ebaf32c0df

14Nov22

Sonic booms heard across Florida as Space Force's secretive X-37B plane makes landing Emre Kelly Florida Today

CAPE CANAVERAL, Fla. – A secretive Space Force spaceplane streaked across Florida early Saturday, generating unmistakable sonic booms en route to a landing at Kennedy Space Center that wrapped up another record-breaking mission.

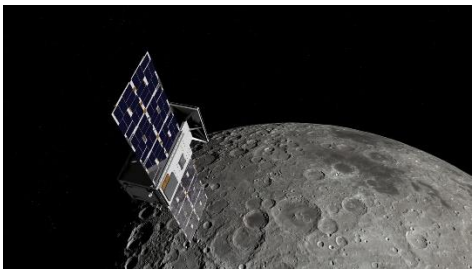
Dozens of sonic boom reports surfaced as X-37B, a robotic military spacecraft that looks like a miniature space shuttle, followed an eastern path across the state and eventually landed at KSC's Launch and Landing Facility. The Space Force confirmed touchdown occurred at 5:22 a.m. EST.

All told, the 30-foot spaceplane spent 908 days in low-Earth orbit, shattering the previous record of 780 days. Its purpose is largely a secret, but the Department of Defense says some of its secondary duties include hosting military research payloads, science experiments, and even NASA investigations.

Though physically small, X-37B has captured countless headlines since its first launch in 2010, mainly due to secrecy but also because of its unprecedented ability to stay in orbit years at a time. https://www.usatoday.com/story/news/world/2022/11/12/sonic-booms-heard-florida-space-force/10681158002/

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

NASA Capstone Cubesat to Arrive at Moon Sunday, Clearing Way for Artemis Eric Mack Nov. 11, 2022



While NASA works toward a planned launch of its first big Artemis mission next week, a tiny cubesat is aiming to reach the moon this weekend and serve as a pathfinder for upcoming stages of the Artemis program.

Capstone, short for the Cislunar Autonomous Positioning System Technology Operations and Navigation Experiment, is the size of a microwave oven and designed to circle the moon via an eccentric elliptical orbit that has never been flown by a spacecraft before.

Capstone is checking out the route in advance of NASA's plans to build a space station dubbed Gateway to ply the same orbit. The Gateway will be a waypoint for Artemis astronauts, equipment, and supplies on their way to the lunar surface.

The small satellite is expected to perform its initial orbit insertion maneuver at 4:18 p.m. PT on Sunday. The spacecraft's propulsion system will fire at just the right time while traveling 3,800 miles per hour to enter the special orbital path, which will allow it to circle the moon along a very fuel-efficient route, relying instead on the gravitational pulls of the moon and Earth to stay on course. https://www.cnet.com/science/space/nasa-capstone-cubesat-set-to-arrive-at-moon-sunday-ahead-of-artemis-missions/

Korean Institute of Aviation Safety and Eurocae collaborate on UAS and eVTOL standards November 14, 2022

The Korean Institute of Aviation Safety Technology (KIAST) has signed a Memorandum of Understanding with European standards agency Eurocae to collaborate to support further development of standardization activities in aviation.

The South Korean aviation industry has been increasingly active, especially in the Unmanned Aircraft Systems and Vertical Take-Off and Landing domain. Worldwide interoperability and global harmonization need international inputs to develop globally accepted and applicable standards. This is an aspect that EUROCAE aims to achieve through its standards, and this goal can only be met if standards are developed in a collaborative manner.

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

In view of the successful collaboration between EUROCAE and Standard R&D Center of Sejong University, a Memorandum of Understanding was signed between EUROCAE and the Korean Institute of Aviation Safety Technology on 10 November 2022. EUROCAE and KIAST agreed on ways to enhance collaboration to support further development of standardization activities in aviation. https://www.legendaryleadersininnovation.com/public/topics/23/UAS

SAE Media Group Announces Counter UAS Technology USA 2022 Participants

November 14, 2022 Events | News

SAE Media Group is pleased to announce the participants of its 2nd Annual Counter UAS Technology USA Conference. The highly anticipated event will take place on December 5 and 6, 2022, at the Crystal City Marriott at Reagan National Airport in Arlington, VA.

Counter UAS Technology USA 2022 will welcome more than 150 senior personnel from US DoD agencies, international defense organizations and leading industry providers. Places are becoming limited; it is advised to register soon to secure a place at http://www.counter-uas-tech.com/UASWeeklyPR.

The two-day agenda features more than 24 sessions from the military including insights from notable industry giants, giving attendees the opportunity to learn about and experience the latest in counter-UAS technology first-hand. To view the full conference agenda, visit http://www.counter-uas-tech.com/UASWeeklyPR.

https://uasweekly.com/2022/11/14/sae-media-group-announces-counter-uas-technology-usa-2022-participants/?utm_source=rss&utm_medium=rss&utm_campaign=sae-media-group-announces-counter-uas-technology-usa-2022-participants&utm_term=2022-11-14

GreenSight's drone based WeatherHive system on USAF shortlist Bruce Crumley - Nov. 14th 2022

Boston-based startup GreenSight is reporting a significant business breakthrough with the selection of its WeatherHive drone swarm atmosphere sensing tech for prototype development by the US Air Force and Defense Innovation Unit.

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

GreenSight was one of five companies selected by the DIU and USAF's Weather Systems Branch to develop a prototype of its nano drone-based system to improve forecasting capabilities by deploying UAVs directly into the atmosphere for measurement. WeatherHive craft can cover up to 50 square miles per flight and generate a dense 3D cube of data with better predictive results. Once the platform has been fully tested and readied for production status, it will be considered for procurement by a range of US government agencies.

GreenSight calls the WeatherHive approach unique in its ability to directly sample and measure atmospheric conditions over very large areas with reduced operational costs.

Palm-sized WeatherHive nano drones are relatively cheap, reusable, and capable of flight over 10 miles before needing to dock for recharging. The automated UAVs weigh just 150 grams and can be deployed in the dozens or hundreds, depending on the size of the area being measured. https://dronedj.com/2022/11/14/greensights-drone-based-weatherhive-system-on-usaf-shortlist/

15Nov22

NASA's CAPSTONE probe overcomes malfunction, reaches orbit around the moon A.L. Lee NOV. 14, 2022

Nov. 14 (UPI) -- NASA's CAPSTONE CubeSat probe arrived in orbit around the moon Sunday night in a major win for the space agency following a major engine malfunction over the summer that nearly derailed the mission.

CAPSTONE had to fire its engines twice more to get back to the moon, where it entered a highly elliptical near rectilinear halo orbit or NRHO about 7:39 p.m., NASA said.

The 55-pound spacecraft, which looks like a microwave oven, was disabled for several weeks after a faulty engine burn sent it careening into outer space on Sept. 8. Back on Earth, it took mission control until early October to fix the propulsion system and stabilize the orbiter which was fired up again about two weeks ago after it reemerged 69,000 miles off course.

Over the next five days, CAPSTONE will perform maneuvers to perfect its orbit while sending constant data back to mission control. https://www.upi.com/Science_News/2022/11/14/nasa-capstone-probe-moon-orbit/3341668435646/

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

AFWERX Funds Further Development of Advanced Aircraft's Hybrid Advanced Multi-Rotor Miriam McNabb November 14, 2022

Advanced Aircraft Company has been chosen by AFWERX for an SBIR Phase II contract to further develop the HAMR: AAC's Hybrid Advanced Multi-Rotor Uncrewed Aerial System.

HAMR's multi-rotor configuration and distributed electric propulsion system give the aircraft outstanding flight endurance.

HAMR's distributed electric propulsion system incorporates an electronic fuel-injected and computer-controlled dual piston engine driving an integrated electric generator producing up to 4000W to power the onboard sensors, six independent brushless DC electric motors, and a backup battery.

HAMR has a maximum payload capacity of 12 pounds and dual payload bays. It can carry multiple sensors or devices, including a wide range of optimal or infrared cameras, LiDAR systems, EO, IR, or communications systems or can carry additional fuel for longer flight endurance. Designed for military use, HAMR is extremely portable and can be launched quickly without ground support infrastructure. https://dronelife.com/2022/11/14/afwerx-funds-further-development-of-advanced-aircrafts-hybrid-advanced-multi-rotor/

Elbit Systems Awarded $72 Million to Supply Hermes 900 Unmanned Aircraft Systems November 14, 2022 News

Elbit Systems Ltd. announced today that it was awarded a contract valued at $72 million to supply Hermes™ 900 Unmanned Aircraft Systems (UAS) and training capabilities to an international customer. The contract will be performed over a two-year period.

Under the contract, Elbit Systems will supply Hermes 900 UAS equipped with the SkEye™ Wide Area Persistent Surveillance system, SPECTRO™ XR multi-spectral Electro-Optical payload, Satellite Communication, and Signal Intelligence payloads.

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

The Hermes 900 UAS has been selected to-date by more than 15 customers attesting to its competitive edge combining technological sophistication, reliability, open architecture, and a solid growth path. https://uasweekly.com/2022/11/14/elbit-systems-awarded-a-72-million-contract-to-supply-hermes-900-unmanned-aircraft-systems/?utm_source=rss&utm_medium=rss&utm_campaign=elbit-systems-awarded-a-72-million-contract-to-supply-hermes-900-unmanned-aircraft-systems&utm_term=2022-11-15

ANRA Technologies Wins FAA Contract for Remote ID Collection, Correlation, Dissemination November 14, 2022 News

ANRA Technologies today announced it has won a contract to demonstrate the ability to collect, aggregate and retransmit Broadcast Remote ID (B-RID) messages. ANRA will convert these B-RID messages to Network Remote ID (N-RID) messages that can be shared in the Unmanned Aircraft Systems Service Supplier Network. This FAA-funded project will test and validate advanced air traffic management functions for UAS to safely operate in conformance with the FAA Remote Identification Final Rule requiring remote identification of uncrewed aircraft.

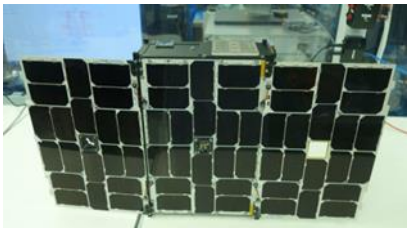
However, for widespread and scalable UAS Traffic Management deployment, USS will need the ability to track their drones and other air traffic (both crewed and uncrewed) across long distances to manage operations and prevent collisions. This project will demonstrate a remote identification solution composed of B-RID transmitters and field networked RID receivers to communicate broadcast messages among a federated and integrated UTM network. https://uasweekly.com/2022/11/14/anra-technologies-wins-faa-contract-for-broadcast-remote-id-collection-correlation-and-network-dissemination/?utm_source=rss&utm_medium=rss&utm_campaign=anra-technologies-wins-faa-contract-for-broadcast-remote-id-collection-correlation-and-network-dissemination&utm_term=2022-11-15

16Nov22

GeoOptics wins NASA Commercial SmallSat Data contract Debra Werner — November 15, 2022

SAN FRANCISCO — GeoOptics Inc. won a NASA contract worth a maximum of $7 million over five years to provide researchers with data acquired by the company's small satellite constellation.

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com



The contract, announced Nov. 14, was GeoOptics' first as part of NASA's Commercial SmallSat Data Acquisition program. Pasadena, Calif.-based GeoOptics has supplied radio occultation data to the National Oceanic and Atmospheric Administration for weather forecasts since 2020.

The NASA contract directs GeoOptics to deliver a comprehensive catalog of its data products "indicating at a minimum: the data sets, associated metadata and ancillary information; data cadence; data latency; area coverage; and data usage policy," according to the news release.

NASA acquires commercial data under licenses that allow the agency to share datasets with U.S. government agencies and partners. https://spacenews.com/geooptics-nasa-contract/

A new type of air terminal opens for flying taxis Nov 16th 2022 | PONTOISE-CORMEILLES

As the morning mist slowly clears over Pontoise-Cormeilles, a regional airport 40km north-west of central Paris, it is time to check in at the vertiport. This is the name the aviation industry has adopted to describe a new type of air terminal. Vertiports will be used by evtols, or flying taxis as they are sometimes called. As the name indicates, these aircraft take off and land vertically, like helicopters. But instead of being powered by jet turbines they rely on sets of electrically driven rotors, much like hovering drones.

Pontoise-Cormeilles' vertiport, which opened on November 10th, so far serves only as a prototype—for, being the first of its kind in Europe, it has no matching facility to act as a destination. But Groupe adp, which manages Paris's airports, including Pontoise-Cormeilles, hopes that will soon change. The Paris Olympics open in July 2024. By then, the firm plans for at least two routes to be operating in the region with a total of ten air taxis, each flying two or three trips an hour. They would link the Olympic Village with conventional airports and also with the Paris heliport at Issy-les-Moulineaux on the southern side of the city near an emergency medical center. https://www.economist.com/science-and-technology/2022/11/16/a-new-type-of-air-terminal-opens-for-flying-taxis?utm_content=ed-picks-article-link-1&etear=science_nl_1&utm_campaign=r.science-newsletter&utm_medium=email.internal-newsletter.np&utm_source=salesforce-marketing-cloud&utm_term=11/16/2022&utm_id=1391412

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

Drones flying to protect endangered Jewish cemeteries in Ukraine and across Central Europe

Bruce Crumley - Nov. 16th 2022

Despite their destructive, often lethal use in the war ravaging Ukraine, drones will be featured as the tools in the protection and preservation of thousands of Jewish cemeteries across Eastern and Central Europe during a workshop taking place today in Kyiv.

The drone demonstration and instruction session is part of events organized this week in the Ukraine capital by the European Jewish Cemeteries Initiative. They reinforce the organization's work using UAVs to carry out complete survey and mapping missions of many of the over 3,000 Jewish graveyards in the region. Many are in Ukraine which, prior to World War II, is thought to have been home of the largest Jewish community in the world.

The workshop is designed to teach volunteer architecture and engineering students from Ukraine to pilot drones and carry out data collection missions over the nation's Jewish cemeteries. Fully 44% of Jewish burial grounds in Central and Eastern Europe are considered in need of urgent repair and protection work.

Maps and surveys produced by the UAV missions will not only establish exact locations and delineations of those burial sites but also prioritize those requiring preservation measures. The European Jewish Cemeteries Initiative has about 30 active graveyard protection projects underway, and it may well need to expand those once drone missions come back with data on the situation in Ukraine.

Founded in 2015 with over $1 million in funding from Germany and the European Union, the European Jewish Cemeteries Initiative has monitored many of the 10,000 community burial sites across the continent. https://dronedj.com/2022/11/16/drones-flying-to-protect-endangered-jewish-cemeteries-in-ukraine-and-across-central-europe/

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

17Nov22

Drone War Accelerates Over Ukraine SÉBASTIEN ROBLIN NOVEMBER 14, 2022

Putin has doubled down on his calamitous war by announcing a partial mobilization aimed at conscripting 300,000 troops for Russia's increasingly depleted military. He also has ordered missile, manned bomber and drone attacks on major Ukrainian cities and infrastructure.

Unmanned aerial vehicles large and small continue to play a dominant role in this terrible conflict. Missile-armed unmanned combat air vehicles and loitering munitions have shown their value. Russia has been running low on conventional stand-off range missiles it can only build in single digits monthly, prompting it to purchase hundreds of "kamikaze drones" from Iran and fly them into action.

Starting in September, at least 200 have carried out attacks on Kviv, Odessa and beyond. Also disruptive has been the adaptation of cheap, commercial off-the shelf drones by both sides to execute surprisingly effective tactical-range strikes and, even more lethally, to acquire targets for artillery fire of unprecedented precision and speed.
https://insideunmannedsystems.com/drone-war-accelerates-over-ukraine/

PG&E Gets BVLOS Waiver for Entire State of California Miriam McNabb November 16, 2022 by DRONELIFE Staff Writer Ian M. Crosby

Public safety and critical infrastructure UAS consulting group Skyfire Consulting announced that it has successfully assisted Pacific Gas & Electric (PG&E) in acquiring a Beyond Visual Line of Sight (BVLOS) waiver under a Part 107 for the entire state of California.

PG&E will utilize the BVLOS waiver to fly large sections of their critical infrastructure in high fire-threat districts throughout California. With the addition of its work with PG&E, Skyfire currently contributes to all stages of environmental response, including prevention, wildfire response, and environmental cleanup and reforestation with DroneSeed.

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

One of the United States' largest combined natural gas and electric utilities, PG&E services roughly 16 million customers. The company provides Californians with critical utility services across 70,000 square miles. By increasing their use of UAS, PG&E's effectiveness and ability to respond to incidents will both benefit from major improvement. Skyfire's expertise and adaptability in meeting PG&E'S needs has made them an indispensable partner.
https://dronelife.com/2022/11/16/pge-gets-bvlos-waiver-for-entire-state-of-california/

Air Mobility Testbed in France Launched: Open for UAM Ecosystem Miriam McNabb November 16, 2022 by DRONELIFE Staff Writer Ian M. Crosby

Groupe ADP, Skyports and Volocopter have together commissioned Europe's premier fully integrated vertiport terminal for the urban air mobility (UAM) industry at the Groupe ADP, RATP Group and Choose Paris Region-run Re.Invent Air Mobility testbed at Pontoise-Cormeilles airfield.

The newly launched testbed allows a range of various stakeholders to test technologies and procedures in diverse configurations within a real-life environment. The ability to test on a live airfield makes the testbed an invaluable developmental asset to the entire UAM industry.

Designed together by Skyports and Groupe ADP, the aircraft agnostic testbed provides the entire UAM ecosystem with the opportunity to test and develop their technologies while also promoting collaboration between essential ecosystem partners such as technology pioneers, regulators and local partners like the French Civil Aviation Authority, suppliers, and airlines. The site will allow testing of vehicle integration, ground movement procedures, charging procedures, flight scheduling, situational awareness, and information exchange; as well as passenger journey through the terminal, including security and check-in processes, biometric technologies (provided by SITA), passenger dwell time, and aircraft boarding.
https://dronelife.com/2022/11/16/air-mobility-testbed-in-france-launched-open-for-uam-ecosystem/

Amazon Announces Smaller, Quieter, More Capable Delivery Drone INSIDE UNMANNED SYSTEMS NOVEMBER 11, 2022

Delivery giant Amazon has announced a new delivery drone, one it says is smaller, lighter and quieter than the model currently making deliveries.

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com

The new system, named the MK30, can also fly farther than the current MK27-2 drone, can tolerate a wider range of temperatures, and can fly in light rain, "enabling customers to choose drone delivery more often," the company said in a Nov. 10 blog post.

Prime Air deliveries are slated to begin this year in Lockeford, California, and College Station, Texas. Lockeford is a small town in Central California and the former home of aviation pioneer Weldon B. Cooke, the second licensed pilot in the state. College Station is the home of Texas A&M University.

The MK30 is slated to begin service in 2024. Amazon says its delivery drones are already quiet, but the new one will be quieter by another 25%. The vehicle will be fully vetted by the Federal Aviation Administration before taking flight. https://insideunmannedsystems.com/amazon-announces-smaller-quieter-more-capable-delivery-drone/?mkt_tok=NzU2LUZXSi0wNjEAAAGIJf0_KpkhKkqIC0kiY_JTnQJ30ju1LsQ3Y-8vHVgEayTcx49ezpl9Rboqjrbo1awUKzqKr6BGvbZxDID34TQj4ME2xrd80hWZfMTn0VafIt2v

18Nov22

Archer Unveils Midnight eVTOL Aircraft Jessica Reed | November 17, 2022

Archer Aviation revealed its production aircraft, Midnight, to the public today following its Open House event in Palo Alto on Nov. 16. The company previously developed a demonstrator aircraft, called Maker, to test out the configuration and functionality of its electric vertical take-off and landing concept. The team at Archer expects to certify Midnight with the Federal Aviation Administration towards the end of 2024.

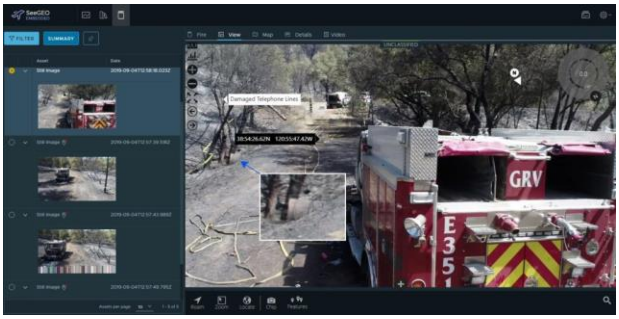
Archer's CEO and founder, Adam Goldstein, shared in an interview with *Avionics International*. "We validated a lot of our technology; we validated the configuration, the tiltrotor, and the flight controls. It gave us confidence in the technology and helped set a lot of the frameworks with the FAA that allowed us to get to where we are today—the building and unveiling of our production plane."

Archer announced its first eVTOL route in partnership with United Airlines last week. The route will take passengers to and from Newark Airport and a heliport in downtown Manhattan.

For initial urban air mobility (UAM) operations, Archer will rely on existing infrastructure, such as the heliport in Manhattan that will be used for the route to and from Newark. https://www.aviationtoday.com/2022/11/17/archer-unveils-midnight-evtol-aircraft/?oly_enc_id=7021F0632090D7B

Skyfire and Textron Partner to Offer Actionable Data for Drone First Responder Programs

Jessica Reed | November 17, 2022



Skyfire Consulting recently announced a partnership with Textron Systems to offer useful data to public safety agencies as well as Drone First Responder programs. Skyfire's team offers consulting services for the use of unmanned aerial systems in public safety applications. Textron's industry-leading geospatial products include the SeeGEO software which enables the creation of mapping products from video footage taken by drones. First responders can apply artificial intelligence and machine learning algorithms to make informed decisions about the data they collect.

Skyfire announced this week that it assisted PG&E (Pacific Gas & Electric) in obtaining a waiver for beyond visual line of sight operations in California under Part 107. PG&E will use the waiver, which covers operations throughout the entire state, to monitor parts of their critical infrastructure within districts that are most vulnerable to fires.
https://www.aviationtoday.com/2022/11/17/skyfire-textron-partner-offer-actionable-data-drone-first-responder-programs/

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