UAS and SmallSat Weekly News

Contents

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9-1-1 Drone Dispatch in Manatee County, Florida Could Save Heart Attack Victims Jim Magill October 01, 2020

Manatee County, Florida may become the first local government in the country to use its emergency 9-1-1 system to dispatch the delivery of emergency medical supplies by drone for heart attacks and other medical emergencies.

On September 15, the Manatee County Board of Commissioners gave approval to a preliminary agreement between the county Public Safety Department and Orlando-based Archer First Response Systems, which would install an unmanned aircraft system, comprising a drone capable of carrying a medical payload and a ground control hub, on county property. Under the agreement, the county would lease the UAS from Archer for one-year for $1 per month. The bulk of the costs of operating the system will be borne by Tampa General Hospital.

The county's approval of the contract is the first step in a process to establish the 9-1-1 system dispatch of drones within a small designated operating area close to the county's EMS Lakewood Ranch Base in Bradenton. The Federal Aviation Administration still must approve Archer's application for waiver to operate the autonomous drones in the county.
https://dronelife.com/2020/10/01/9-1-1-drone-dispatch-in-manatee-county-florida-could-save-heart-attack-victims/

ANTI-DRONE COMPANY RECEIVES $12 MILLION IN FUNDING FROM TEMPOCAP October 2, 2020 Sally French News

San Francisco-based anti-drone technology startup Dedrone announced this week that it received $12.1 million in funding — this time in a funding round led by European technology investor TempoCap.

Dedrone said the investment will be used to accelerate development of its namesake Dedrone platform, a system designed to provide early warning, classification and mitigation against drone threats. Dedrone's combined hardware and software system use radio sensors as well as special camera and radar systems to detect approaching drones, with the help of data processed by the company's software.

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Many people, both in the drone industry and outside, have been calling for more anti-drone technology after a number of high-profile incidents where drones have disrupted important operations. http://www.thedronegirl.com/2020/10/02/dedrone-tempocap-funding/

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AeroVironment Introduces Family of Loitering Missile Systems October 2, 2020 News

AeroVironment, Inc. , a global leader in unmanned aircraft systems, today announced the introduction of its family of loitering missile systems, featuring the new Switchblade 600 to define a new category of extended range loitering missiles. The U.S. Army recently awarded AeroVironment a $76 million contract award for Switchblade 300 system procurement and support as part of the Lethal Miniature Aerial Missile System program. Based on the same tube-launched, collapsible wing, electric propulsion architecture as Switchblade 300, the new, larger Switchblade 600 offers expanded capabilities for engaging larger, hardened targets at greater distances.

Rapidly deployable, highly maneuverable, with high performance optics and scalable munition payloads, AeroVironment's Switchblade loitering missile systems enable the warfighter to easily launch, fly, track and engage beyond line-of-sight targets and light armored vehicles with lethal effects and minimal or no collateral damage. A required man-in-the-loop arming sequence provides positive target confirmation, while AeroVironment's patented "wave-off" feature and recommit capability delivers the unique ability for operators to cancel an attack within seconds of impact to avoid collateral damage and then re-engage targets on command. In addition, each system's small form factor and low acoustic, visual and thermal signature make them difficult to detect, recognize or track even at close range. https://uasweekly.com/2020/10/02/aerovironment-introduces-family-of-loitering-missile-systems/?utm_source=rss&utm_medium=rss&utm_campaign=aerovironment-introduces-family-of-loitering-missile-systems&utm_term=2020-10-02

Purdue Researchers Working with Abu Dhabi On Cybersecurity Of Drones October 2, 2020 News

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A group of Purdue University researchers have been tasked to make sure drones and their systems could operate securely, safely and efficiently in the United Arab Emirates capital. Inseok Hwang, a professor in the School of Aeronautics and Astronautics, is principal investigator on a three-year, $2.3-million grant from the Technology Innovation Institute in Abu Dhabi to study the application of secure drone swarms in urban environments.

The project requires expertise in autonomous vehicles, control, sensing, virtual reality and security. James Goppert, a visiting assistant professor in the School of Aeronautics and Astronautics and managing director of the UAS Research and Test Facility, and Dongyan Xu, the Samuel D. Conte Professor of Computer Science and director of CERIAS (Center for Education and Research in Information Assurance and Security), Purdue's cybersecurity research and education center, are co-principal investigators on the project. The project will utilize one of Purdue's unrivaled assets, the UAS Research and Test Facility. The 20,000-square-foot, 35-feet high facility, located at Hangar 4 of the Purdue University Airport, features the largest indoor motion capture system in the world and offers unique capabilities for novel research.

Goppert will build a mixed reality environment, combining a virtual reality urban environment with a scaled physical model of the city. The drones will fly and navigate the city, and the environment can be programmed to simulate a wide range of settings, including weather, traffic and urban development, to test the drones' applicability and agility. The testing will be done with single vehicles as well as swarms, which could include 10 drones.
https://uasweekly.com/2020/10/02/purdue-researchers-working-with-abu-dhabi-on-cybersecurity-of-drones/?utm_source=rss&utm_medium=rss&utm_campaign=purdue-researchers-working-with-abu-dhabi-on-cybersecurity-of-drones&utm_term=2020-10-02

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How COVID-19 helped the struggling drone industry take flight 10-02-20 CONNECTED WORLD DANIEL TERDIMAN

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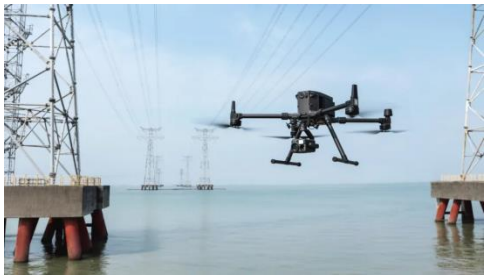
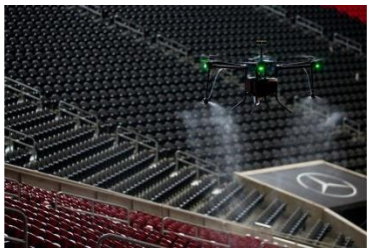


Before COVID-19 hit, San Diego Gas & Electric sent technicians up in helicopters to string power lines between towers. Now the utility has adopted DJI's Matrice 300 drones for these line-stringing operations—and no one has to evacuate. Its experience moving from manual methods to automated, drone-driven techniques is being increasingly matched across the agriculture, infrastructure, construction, public safety and energy industries as the pandemic persists, says Cynthia Huang, director of business development at drone giant DJI.

Companies throughout those industries have no choice but to maintain the reliability of vast and complex systems, even as they grapple with the health and safety issues imposed by the coronavirus. Drones offer them the ability to do efficient data gathering, including taking video and photos and using artificial intelligence to do some onboard analysis.
https://www.fastcompany.com/90559356/dji-drones-utility-inspection-covid-19-pandemic

Disinfecting drones will clean Atlanta stadium between events

Jon Porter**@JonPorty** Oct 2, 2020



The purpose-built D1 disinfecting drones are being provided by Lucid Drone Technologies, and use electrostatic spraying nozzles to distribute the nontoxic disinfecting chemicals. The stadium claims it's the first professional sports stadium to use cleaning drones, and it says they reduce the time it takes to clean the stadium's seating area by 95 percent, freeing up staff to work elsewhere. The drones will also disinfect the stadium's handrails and glass partitions.

As the world has reckoned with how to reopen public spaces during a pandemic, remote cleaning solutions like these have emerged as a high profile way of disinfecting large areas efficiently, while being able to keep cleaning staff socially distanced from one another.

But an excessive focus on disinfecting surfaces has been criticized as "hygiene theater" by some experts in a recent report in *The Atlantic*. That's because while the *CDC* says surface transmission is "possible," it "isn't thought to be the main way the virus spreads." Disinfecting areas isn't thought to be directly harmful, but hygiene theater risks creating a false sense of security, https://www.theverge.com/2020/10/2/21498362/atlanta-mercedes-benz-stadium-falcons-united-nfl-mls-coronavirus-covid-19-disinfection

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General Dynamics Land Systems awarded $1.2 Billion Army Contract for Stryker Vehicles Oct 02, 2020

STERLING HEIGHTS, Mich., Oct. 2, 2020 /PRNewswire/ -- General Dynamics Land Systems (GDLS), a business unit of General Dynamics (NYSE: GD), was awarded a $1.219 billion contract to produce, test and deliver Interim Maneuver Short-Range Air Defense (IM-SHORAD) systems to the U.S. Army. The Army's initial order on the contract calls for 28 Stryker IM-SHORAD vehicles for $230 million. "General Dynamics and our teammates Leonardo DRS and Raytheon are pleased to be able to partner with the Army to bring this powerful capability to U.S. Soldiers," said Don Kotchman, Vice President and General Manager of GD Land Systems."

The IM-SHORAD is designed to counter threats from Unmanned Aerial Systems and a multitude of other Rotary and Fixed Wing aircraft, and provides a common Army platform that is cost-effective, highly mobile, survivable, sustainable and transportable.

Work locations and funding will be determined with each order, with an estimated completion date of September, 30, 2025. GD Land Systems has production locations in Tallahassee, Florida; Scranton, Pennsylvania; London, Ontario; Lima, Ohio; and Anniston, Alabama. https://www.prnewswire.com/news-releases/general-dynamics-land-systems-awarded-1-2-billion-us-army-contract-for-stryker-im-shorad-vehicles-301144738.html

ASTM Partners with DRONERESPONDERS to Standardize Public Safety UAS Training DRONERESPONDERS

WEST CONSHOHOCKEN, PA – ASTM International and the DRONERESPONDERS Public Safety Alliance – an official program of AIRT, the non-profit organization supporting Drones For Good, today announced an initiative designed to standardize the training and use of unmanned aircraft systems and related technology across the public safety and emergency services sectors around the world.

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The new Public Safety UAS Standardized Training Initiative will be based on ASTM International Standard Guide for Training for Public Safety Remote Pilot of Unmanned Aircraft Systems Endorsement and administered by DRONERESPONDERS for the public safety sector.

Public Safety UAS STI will provide public safety UAS training providers with a third-party evaluation of their curriculum for conformance to applicable standards. Programs that meet or exceed UAS STI will received a certificate and digital emblem from DRONERESPONDERS and ASTM confirming they have been approved as a Public Safety UAS Approved Training Provider. https://www.droneresponders.org/post/astm-international-partners-with-droneresponders-to-standardize-public-safety-uas-training?postId=5f7a70210d3ec50017b85fea

DRONES WOULD BE ABLE TO DELIVER WEAPONS TO MILITARY, NATO TEST SHOWS October 5, 2020 Sally French News

The North Atlantic Treaty Organization Allied Command Transformation, Joint Force Development Directorate, Operational Experimentation branch teamed up with Virginia-based drone company DroneUp to test how drones can provide autonomous last mile resupply to military fields.

Last month, the NATO branch along with Pale Horse Weapons Institute, Daniel Defense, Ultimate Training Munitions and WeaponLogic (with the help of DroneUp, which provided the drones) conducted an exercise in Lawrenceville, Virginia where they tested an "autonomous resupply experiment" in a safe field environment. As part of the experiment, which was conducted on Sept. 21, 2020, participants tested different factors including different payloads, multiple recipients and making the whole thing happen completely autonomously.

A spokesperson for DroneUp said that drones wouldn't necessarily deliver just weapons, but also water or medical supplies, noting that this could put "fewer soldiers in harms way. DroneUp and OPEX found that the experiment was successful, and this capability has utility across numerous military and deployed roles, but especially in emergency medical resupply and the assistance of isolated personnel."

DroneUp has had its hands in a number of aspects of the drone industry, whether it's delivering COVID-19 test kits to people's homes, or providing LAANC request capability.
http://www.thedronegirl.com/2020/10/05/deliver-weapons-nato/

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Drones in Telecom: GLOBHE Signs Global Agreement Miriam McNabb October 02, 2020

Swedish drone services company GLOBHE has signed a global agreement with a world leading telecom company. The GLOBHE network will provide telecom site inspections by drones in 30 countries: "from Norway in the north to South Africa in the south." The deal could be one of the largest drone services contracts executed to date: the reach of the program could provide communities across the globe with their first opportunity to benefit from commercial drones.

"Instead of using traditional methods, such as climbing the telecommunications towers, which is less efficient, provides limited data and comes with certain risks; drones will now be surveying the towers to ensure uninterrupted, high quality communication services to citizens worldwide," says the press release. "GLOBHE is well positioned to perform global inspections through our Crowddroning platform connecting over 3700 professional drone pilots in over 70 countries to fly missions on demand."

The drones will be used for ongoing service and maintenance inspection, as well as capturing damages from sudden onset changes such as natural disasters, to ensure access to communications in affected, hard to reach areas. https://dronelife.com/2020/10/02/drones-in-telecom-globhe-signs-global-agreement/

Bell APT 70 Successfully Completes NASA's Systems Integration/Operationalization Activity 2020-10-01 Press UAV Expert News

Bell Textron Inc. announced today the successful flight of the Bell Autonomous Pod Transport 70 as part of a joint flight demonstration with NASA. Bell was selected to participate in NASA's Systems Integration and Operationalization (SIO) activity in 2018, which includes multiple flight demonstrations focusing on different types of Unmanned Aircraft Systems and their flight environments.

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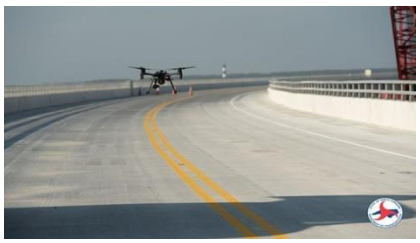
The objective of Bell's SIO demonstration was to execute a Beyond Visual Line-of-Sight mission in an urban environment transitioning into and out of Class B airspace representing future commercial flights. Mission results will be used to evaluate and demonstrate Detect and Avoid and Command and Control technologies for use in future certified operations in controlled and uncontrolled airspace. Data collected during the demonstration will be used to support future standards development and Federal Aviation Administration certification guidelines.

Launching from Bell's Floyd Carlson field in Fort Worth, TX, the APT 70 flew a preprogrammed 10-mile circuit path along the Trinity River. Once armed from the ground control station, the APT 70 initiated a vertical takeoff. The vehicle then rotated to fly on its wings where it became nearly silent to the ground below. The vehicle executed its mission profile at an altitude of 500 feet above ground level. The route included a road crossing and transition in and out of Class B airspace. Communication between the ground station and the aircraft was maintained through a redundant datalink. A prototype airborne detect and avoid system, along with visual observers, provided the remote pilot with awareness of air traffic in the vicinity and recommended flight maneuvers. https://www.uavexpertnews.com/2020/10/bell-apt-70-successfully-completes-nasas-systems-integration/?utm_source=Master&utm_campaign=736a9fb64e-EMAIL_CAMPAIGN_2017_12_20_COPY_01&utm_medium=email&utm_term=0_35ad7bc94d-736a9fb64e-89168288

NCDOT Awarded First-Ever Waiver for Drone Bridge Inspections October 5, 2020

Mapping and Surveying News



Drones are the N.C. Department of Transportation's newest tool in maintaining the safety of the state's bridges and other infrastructure.

The Federal Aviation Administration on Friday approved a waiver that allows NCDOT to operate Unmanned Aircraft Systems beyond visual line of sight while conducting bridge inspections. The announcement makes NCDOT the first state transportation agency to have been awarded such a waiver, paving the way for other states to use drones in bridge and infrastructure inspections.

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The waiver application was developed in part with Skydio, the largest U.S.-based drone maker. Skydio drones are powered by on-board artificial intelligence that enables each craft to avoid obstacles in complex areas that lack a reliable GPS signal, such as the trusses beneath bridges.

Ben Spain, the NCDOT's UAS program manager, said drones have been used since 2016 to conduct bridge inspections. But by enabling the drones to move beyond the pilot's line of sight, the inspections will be able to collect more high-resolution images in difficult to see places so inspectors can better analyze the bridge's integrity and identify possible problems.
https://uasweekly.com/2020/10/05/ncdot-awarded-first-ever-waiver-for-drone-bridge-inspections/?utm_source=rss&utm_medium=rss&utm_campaign=ncdot-awarded-first-ever-waiver-for-drone-bridge-inspections&utm_term=2020-10-05

Everdrone Awarded Patent to Enable Drone Operations In Complex Airspace

October 5, 2020 News

Everdrone, a global leader in autonomous drone technology, announces today that it has been approved for its first patent by the European Patent Office (EPO). Everdrone's latest patented technology focuses on combining vision technology with unmanned aerial vehicles to allow drones to fly safely and accurately in low altitude airspace where obstacles such as buildings and vegetation are often present.

The recently approved patent relates to a method of comparing camera data to automatically validate the onboard sensors are working correctly."We're thrilled about the approval of Everdrone's first patent," says Mats Sällström, CEO of Everdrone. Everdrone offers a service where drones equipped with Automated External Defibrillators and other medical supplies are dispatched to the scene of emergency situations. The company works with Sweden's national emergency call centre, SOS Alarm, and the Centre for Resuscitation Science at Karolinska Institutet for research and development.

Most recently, Everdrone expanded its reach into Denmark in partnership with Copenhagen Emergency Medical Services. Copenhagen EMS acts as a research partner and is responsible for emergency dispatch services to determine which calls need priority drone assistance, while Everdrone coordinates the delivery of AEDs via drone to the scene of cardiac arrests.
https://uasweekly.com/2020/10/05/everdrone-awarded-patent-to-enable-drone-operations-in-complex-airspace/?utm_source=rss&utm_medium=rss&utm_campaign=everdrone-awarded-patent-to-enable-drone-operations-in-complex-airspace&utm_term=2020-10-05

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Drone industry to be worth $92 billion by 2030 despite COVID Josh Spires Oct. 5th 2020

Research firm ABI Research is predicting the drone industry will be worth a whopping $92 billion by 2030 despite COVID shutting down the world. The growth is expected to be a result of Remote ID being rolled out and the use of 5G in drone operations.

Looking to the future, three major aspects will ensure the drone industry as a whole will grow and advance further into everyday life. New regulatory changes, like the drone registration happening down under, the rollout of Remote ID in the US, and the introduction of 5G into the world of commercial drone operations.

The drone industry is set to have an annual compound growth rate of 25% over the $9.5 billion in revenue for 2020. Of the estimated $92 billion, 70% is expected to be the commercial sector alone, with the other 30% made up of recreational and toy-grade drones.

Looking at the current drone registrations stats around the world, the US currently has 1.7 million consumer drones pilots and another 400,000 commercial pilots. The EU has over 1 million registrants, while China is slowly catching up with 400,000 registered drones. https://dronedj.com/2020/10/05/drone-industry-to-be-worth-92-billion-by-2030-despite-covid/

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Kratos Secures Potential $130M Navy Aerial Target Production Contract Matthew Nelson October 6, 2020 Contract Awards, News

Kratos Defense and Security Solutions will initially manufacture 35 subsonic aerial target systems for the U.S. Navy as part of a potential $130.1M full-rate production contract.

The military service placed an initial $29.2M order for the first batch of BQM-177A SSATs along with the technical data package, Kratos said Monday. The Navy could procure additional target drones by exercising the contract's options. Work will take place at contractor facilities in Fort Walton Beach, Florida, and Sacramento, California.

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BQM-177A, which reached initial operational capability status in February 2019, is designed to mimic anti-ship cruise missile threats at sea and fly at a speed of over 0.9 mach. Steve Fendley, president of Kratos' unmanned systems division, said the FRP 1 award and site activation work currently underway mark key steps toward declaration of full operational capability for the program this fiscal year. https://www.govconwire.com/2020/10/kratos-secures-potential-130m-navy-aerial-target-production-contract/

Hyundai Confident on Flying Cars, Steps Up Plans for Full Lineup Kyunghee Park

October 5, 2020, 5:00 PM EDT

South Korea's biggest automaker is stepping up its pursuit of flying cars, planning a full lineup of aerial vehicles that it envisages zigzagging city skies within a decade. Hyundai Motor Group is developing models that will carry five or six people within metropolitan areas and a bigger version to fly between cities, Jaiwon Shin, head of its urban air mobility unit, said in an interview. The company expects to enter the market in 2028, he said.

Unfazed by regulatory and safety hurdles, a slew of planemakers, auto manufacturers and startups are seeking to disrupt the transport industry with flying cars and parcel-hauling drones. Morgan Stanley analysts, in their most bullish estimates, predict such technology could lead to a $2.9 trillion industry by 2040 -- and even their most pessimistic view pegs the value at $615 billion.

Hyundai showcased its flying-car concept, developed with Uber Technologies Inc., at the Consumer Electronics Show in Las Vegas early this year. The company sees pilots from service providers such as Uber initially flying the vehicles, before they become autonomous around 2035. https://www.bloomberg.com/news/articles/2020-10-05/hyundai-confident-on-flying-cars-steps-up-plans-for-full-lineup

SpaceX breaks cycle of scrubs with successful Falcon 9 launch October 6, 2020 Stephen Clark

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Sixty more SpaceX Starlink broadband satellites rocketed into orbit Tuesday from the Kennedy Space Center, breaking a streak canceled launch attempts at the Florida spaceport in recent weeks and nudging the Starlink network closer to reaching a wider population. Nine Merlin 1D engines flashed to life and powered the Falcon 9 launcher off pad 39A at the Kennedy Space Center at 7:29:34 a.m. EDT Tuesday, a few minutes after sunrise on Florida's Space Coast.

The Falcon 9's first stage nailed the landing — the 61st successful recovery of a SpaceX rocket booster — as the second stage injected the mission's 60 Starlink satellites into orbit. The reusable booster used on Tuesday's mission completed its third trip to space and back.

The 60 flat-panel satellites separated from the Falcon 9's upper stage around 8:31 a.m. EDT. A live video feed from the rocket showed the payloads drifting away into space. The spacecraft were expected to unfurl solar panels and activate krypton ion thrusters to begin raising their altitude to roughly 341 miles where they will begin providing broadband service.
https://spaceflightnow.com/2020/10/06/spacex-breaks-cycle-of-scrubs-with-successful-falcon-9-launch/

Microdrones UAS Used for Construction Site Surveying 03 Oct 2020 Mike Ball

Microdrones' unmanned aerial systems solutions have been used by civil engineering firm Feldhaus for a variety of construction-related tasks, including site surveying, inventory management, progress monitoring and aerial documentation.

The use of Microdrones systems, which pair a quadcopter drone with an advanced LiDAR or photogrammetric mapping and surveying payload, allows Feldhaus to expedite workflows, keep workers safe and generate more efficient results for their customers. Providing high-accuracy measurement and highly detailed data, the sophisticated drone surveying equipment enables Feldhaus for the digital future of documentation and measurement.

After aerial photographs are captured by the drone, a 3D terrain model and an orthophoto are generated from the data. The model can be used to determine exact areas, volumes and

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masses for construction projects, and this data can be supplied to the control systems of construction machines. This technology can be used for a variety of related applications, including earthworks and road construction, civil engineering, and mining.
https://www.unmannedsystemstechnology.com/2020/10/microdrones-uas-used-for-construction-site-surveying/?utm_source=UST+eBrief&utm_campaign=649b35909a-eBrief_2020_06Oct&utm_medium=email&utm_term=0_6fc3c01e8d-649b35909a-119747501

Flying Ships

The Flying Ship Company LLC in Leesburg, Virginia is developing unmanned wing-in-ground effect logistics vessels. They call these patent-pending green-tech drones

These innovative vessels will be significantly faster than current modes of surface transport (e.g., ships, trucks and trains) and much less expensive to operate than aircraft. Moreover, Flying Ships will burn less fossil fuel than alternative vehicles, reducing CO2 emissions by as much as 25%. In due course, Flying Ships will be a better alternative in many ways for customers that require inexpensive, overnight shipping along coastal areas and navigable waterways.

Currently, The Flying Ship Company is assessing the business case with major logistics firms, and they are collaborating with regulators to ensure that Flying Ships are classified as boats, not aircraft.
The Flying Ship Company has developed a seven-foot flying demonstrator. Their engineering team is moving to the next phase to build a prototype test vehicle to optimize the configuration for operations in turbulent waters.
flyingships.co

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US Army catches 'air-launched effect' drones in mid-air using another UAV Garrett Reim 6 October 2020

The US Army for the first time caught and recovered Area-I Altius "air-launched effects" drones in mid-air using a quadcopter during Project Convergence exercises in August and September.

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Air-launched effects are small UAVs carried aboard and released from larger aircraft, giving them extended reach. The Altius-600 has 238nm range after launch.

The service avoided $2-3 million in potential damage to a collection of Altius fixed-wing unmanned air vehicles by using a new Flying Air Recovery System. "Previously, the recovery involved belly landing the air vehicle," Rugen told FlightGlobal in September. "But, during [Project Convergence 2020] we've been able to successfully air recover more than 25 times using a quadcopter UAV."

The technique makes use of wing hooks on the Altius. The drone flies into cables suspended by the quadcopter, catching the cables in its hooks and sliding "down to the ground, minimizing any potential damage", said Rugen.

For the catch demonstrations**,** the Area-I UAVs were launched using a rail atop a truck, as well as from airborne Sikorsky UH-60 and MH-60 helicopters and a General Atomics Aeronautical Systems MQ-1C Gray Eagle UAV, he adds. https://www.flightglobal.com/military-uavs/us-army-catches-air-launched-effect-drones-in-midair-using-another-uav/140498.article

SpaceX launches Starlink satellites as it deorbits original ones Jeff Foust October 6, 2020

WASHINGTON — As SpaceX launches a new batch of Starlink satellites, the company is quietly deorbiting the original set of satellites less than 18 months after launch.

A Falcon 9 rocket lifted off from Launch Complex 39A at the Kennedy Space Center, Florida, at 7:29 a.m. Eastern Oct. 6.

The rocket's payload of 60 Starlink satellites deployed from the upper stage 61 minutes after liftoff, nearly 20 minutes after a brief second burn of the upper stage to circularize its orbit, a maneuver SpaceX said is designed to speed up the process of moving the satellites into their final orbits. The Falcon 9 first stage, making its third flight, successfully landed on a droneship in the Atlantic Ocean.

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With this launch, SpaceX has now launched 775 Starlink satellites. However, 47 have since reentered, either through deliberate maneuvers or natural decay, according to data maintained by astronomer and spaceflight analyst Jonathan McDowell. SpaceX has not publicly disclosed why it is deorbiting the v0.9 Starlink satellites. The company said in January it would carry out a "controlled de-orbit of several first iteration Starlink satellites," citing improvements in the communications payload in subsequent Starlink satellites. https://spacenews.com/spacex-launches-starlink-satellites-as-it-deorbits-original-ones/

Drone Swarm or UFO? Verge Aero Helps UFO Seekers Figure it Out Miriam McNabb October 06, 2020

Verge Aero has emerged as a leader in the emerging drone show sector, providing drone light shows and the sophisticated drone light show software needed to create spectacles around the world. Drone light shows are a fascinating use for drones – but they're also an incredible demonstration of drone swarm technology: the software programs large numbers of drones to fly in formations.

As established experts in drone swarm technology, Verge Aero recently provided its expertise to the History Channel's Unidentified: Inside America's UFO Investigations. "The show follows Luis 'Lue' Elizondo – former director of the Advanced Aerospace Threat Identification Program, the secretive Pentagon unit that studied UFOs – as he investigates reports of unexplained aerial phenomena."

The show has gained considerable interest, especially after numerous sightings of aircraft identified by onlookers as drones flying in formation were seen over Western states last year. Despite receiving significant attention, government officials were unable to identify the source of the aircraft. https://dronelife.com/2020/10/06/drone-swarm-or-ufo-verge-aero-helps-ufo-seekers-figure-it-out/

First Automatic Flight of V-150 VTOL PRESS 2020-10-07

Europe's leading provider of Rotary Unmanned Aerial Vehicle (UAV) platforms, UMS SKELDAR, has successfully achieved the remote automatic flight of its V-150 Vertical Take-Off and Landing (VTOL) platform. A world's first, this is a major milestone for both the company and the platform.

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The successful automatic flight has been performed across multiple continents, with the platform itself based in Switzerland and observed by team members onsite. This breakthrough achievement enables UMS SKELDAR to provide remote product demonstrations to prospective customers across the globe and give attendees the opportunity to fully test the system without leaving their base. In the current climate of continued travel restrictions, this is of maximum value. https://www.uavexpertnews.com/2020/10/first-automatic-flight-of-v-150-vtol/?utm_source=Master&utm_campaign=b54a9871f3-EMAIL_CAMPAIGN_2017_12_20_COPY_01&utm_medium=email&utm_term=0_35ad7bc94d-b54a9871f3-89168288

A2Z Drone Delivery Launches Flagship Rapid Delivery System October 6, 2020 News

A2Z Drone Delivery, LLC, developer of a patented tethered freefall drone delivery mechanism, is launching its flagship product, the RDS1 (Rapid Delivery System) which maintains a safe hover of up to 150 feet while its delivery mechanism controls the payload's freefall. It is designed for payloads up to 4.4 lbs. With a range of 2.17 miles, the RDS1 is ideal for rapid deployment of first aid and life-saving medical supplies or to deliver material to destinations where landing the drone is problematic such as a tossing ship or dense forest.

By delivering payloads from a safe hover altitude, it protects recipients from spinning UAV propellers, while mitigating privacy concerns of low-flying drones and abating intrusive rotor noise. The app combines manual control system operations with an onboard sensor array to manage the package's freefall and gently stop its descent just above the ground. The tether and elastic fabric pouch can be reeled back up for reuse or to retrieve materials from personnel on the ground.

"Our rapid delivery system is ideal for situations where a drone cannot safely approach close proximity to its delivery location such as delivering radios or medical supplies to a search and rescue team in a forest or to deliver and retrieve port documents from awaiting cargo ships," said Aaron Zhang, founder of A2Z Drone Delivery, LLC. "Our tethered free-fall delivery technique enables efficient and accurate placement without approaching people, structures or other obstructions like trees and wires." https://uasweekly.com/2020/10/06/a2z-drone-delivery-launches-flagship-rapid-delivery-system/?utm_source=rss&utm_medium=rss&utm_campaign=a2z-drone-delivery-launches-flagship-rapid-delivery-system&utm_term=2020-10-07

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"Know Before You Fly" Gets Big Support from Consumer Technology Association

Miriam McNabb October 07, 2020

"Know Before You Fly" has been one of the drone industry's successes: a collaborative effort between commercial interests, recreational interests and the FAA. Know Before You Fly was started with a partnership between the FAA; the industry's leading advocacy organization, the Association for Unmanned Vehicle Systems International; and the Academy of Model Aeronautics, a voice for recreational flyers. Now, the Consumer Technology Association has joined the partnership to help new operators find the information and guidance they need to fly safely and responsibly.

It serves a critical need in drone industry efforts to create a culture of aviation safety – and to ensure that pilots who purchase drones through a vast variety of retail outlets understand the laws around registration, licensing, and safe operation before they take their drone out for a first flight. Know Before You Fly is a robust campaign which combines point-of-sale materials, educational videos, the #knowb4ufly social media presence and a website.
https://dronelife.com/2020/10/07/know-before-you-fly-gets-big-support-from-consumer-technology-association/

WORLD ECONOMIC FORUM & LOS ANGELES DEFINE PRINCIPLES FOR DRONES IN CITIES October 8, 2020 Sally French News

The World Economic Forum spent the greater part of 2020 working with the Los Angeles Mayor Eric Garcetti's Office and the Los Angeles Department of Transportation to study how drones can best operate in cities. Together, they are developing what they call "the building blocks of a policy road map for implementing Urban Air Mobility)" in the City of Angels.

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Safety: Aircraft, air operators and personnel should be certified

Sustainability: Drone use should not be pursued unless it can improve environmental outcomes

Equity of access: While drones may operate as a premium priced service at the outset, providers should be able to outline a longer-term plan for affordable consumer pricing.

Low noise: Community noise acceptance metrics should be co-created with stakeholders, including city planners, community associations, vehicle manufacturers, service providers and others.

Multimodal connectivity: Drones should connect with existing forms of transport, ideally to reduce use of single occupancy vehicles for short or medium-distance trips.

Local workforce development: Drones should create employment opportunities for the residents of cities and the surrounding regions in which there are operations.

Purpose-driven data sharing: With data sharing, drones should allow for dynamic urban airspace usage and the operation of supportive infrastructure, like vertiports, in a more connected and efficient way.

They were generated from feedback gathered through interviews with leaders in the UAM space, workshops and research institutions. http://www.thedronegirl.com/2020/10/08/world-economic-forum-los-angeles/

SkyGrid Launches All-in-One Drone App to Automate Every Phase of Flight

October 7, 2020 News

Now available for free in the iPad App Store, SkyGrid Flight Control™ simplifies mission planning and execution, allowing drone operators to autonomously surveil a defined area and detect objects in real-time. Powered by artificial intelligence computer vision, the solution enables more efficient search and rescue missions, disaster response, perimeter surveillance, and site inspections.

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SkyGrid has minimized the burden on drone operators by creating one solution that automates airspace, flights, and insights. As the only drone solution built on AI and blockchain technologies, we give operators and enterprises the assurances they need to execute safe, compliant missions."

It enables drone operators to automate airspace authorization, mission planning, flight execution and object detection in one end-to-end solution. The following features and functionality are available:

- Airspace intelligence: Provides a map of airspace classes, boundaries, temporary flight restrictions, notices to airmen, and other advisories.
- Ground intelligence: Displays population density, obstacles, elevation
- Advanced weather data: Details hyper-local precipitation, wind speed and direction, temperature, cloud cover
- Real-time airspace authorization: Automates authorization to fly in U.S. controlled airspace under 400 feet through integration with the Federal Aviation Administration's Low Altitude Authorization and Notification Capability.
- Automated mission planning: Automatically generates area exploration, waypoint, and multi-objective missions based on custom flight parameters.
- Autonomous flight execution: Autonomously launches the drone and performs the pre-defined flight plan.
- AI object recognition: Detects objects in real-time as a drone surveils the defined area with AI computer vision.

More advanced enterprise features are also available for organizations to better manage all drones, pilots, and airspace operations. https://uasweekly.com/2020/10/07/skygrid-launches-all-in-one-drone-app-to-automate-every-phase-of-flight/?utm_source=rss&utm_medium=rss&utm_campaign=skygrid-launches-all-in-one-drone-app-to-automate-every-phase-of-flight&utm_term=2020-10-08

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U.S. Department of the Interior to Use U.S. Manufactured Drones Miriam McNabb October 07, 2020

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After the fleet of U.S. Department of Interior drones was downed earlier this year in response to concerns about Chinese-manufactured drone platforms, the DOI has not flown except for emergency response. (See our 2 part coverage of the U.S. ban on Chinese drones, here and here.) As the party responsible for managing U.S. public lands and land resources, Department of the Interior drones can offer major efficiencies for taxpayers: now, the DOI is moving towards developing a new fleet.

Yesterday, Secretary of the Interior David Bernhardt sent a memo to Department leadership specifying that leadership may purchase approved U.S. manufactured solutions. "The memo outlines clearance to buy **American-made** small unmanned aircraft systems (referred to as Blue sUAS), where there are needs to do so in the field for fighting wildland fires, conducting search and rescue operations, completing training exercises and more," says a DOI release. "Not only will this better enable the Department of the Interior to executive critical missions, it will strengthen America's national security in alignment with the President's Executive Order to Buy American and Hire American." https://dronelife.com/2020/10/07/u-s-department-of-the-interior-to-use-u-s-manufactured-drones/

This massive drone beamed broadband from the sky in a key test Stephen Shankland Oct. 8, 2020

Facebook may have scrapped its Aquila project to beam broadband internet access down from high-altitude drones, but a Japanese venture called HAPSMobile has reported success in testing similar technology. The company lofted a giant solar-powered wing called Sunglider up to an altitude of 62,500 feet for a 20-hour data-beaming test flight in the stratosphere above New Mexico on Wednesday.

Using mobile network technology from Loon, the balloon-based internet access effort from Google parent company Alphabet, the 262-foot-wide aircraft hosted video calls with internet pioneer Vint Cerf, among others. It also withstood strong winds, HAPSMobile said Thursday.

HAPSMobile is majority-owned by Japanese technology and investment firm SoftBank, but a minority stake is from drone maker AeroVironment. Also involved is the HAPS Alliance with Google, an effort to promote the high-altitude pseudo-satellite, or HAPS, technology, to secure radio spectrum globally, to fit into the airspace without causing problems and to make sure HAPS networks work well together.

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The Sunglider is propelled by 10 electric motors and is designed to fly for months at a time. It can carry up to 150 pounds of payload. At elevations above 60,000 feet, or 11.3 miles, it's flying above conventional aircraft and most clouds.

The test took place at Spaceport America near the US Army's White Sands Missile Range in southern New Mexico, where the HAPSMobile team conducted a test flight in June.
https://www.cnet.com/news/this-massive-drone-beamed-broadband-from-the-sky-in-a-key-test/

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