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DroneInsurance.com for More than 30,000 DroneDeploy Users Miriam

McNabb October 11, 2018



Drone insurance is growing in importance for the drone industry, and <u>REIN</u>'s <u>DroneInsurance.com</u>, is making it easy for professionals to get the coverage they need.

"For a monthly amount per drone, businesses can protect their

ground operations," explains DroneInsurance.com. "Operators can purchase Flight Liability Coverage on-demand, for as little as a day or as long as a year with a range of limits. Coverage options for flight equipment including sensors and ground stations are also available."

Insurance is now available through the <u>DroneDeploy App Market</u>, where users can choose to add it to their pre-flight mapping workflows. <u>https://dronelife.com/2018/10/11/droneinsurance-com-simplifying-the-process-for-more-than-30000-dronedeploy-users/</u>

CAA awards UK's most complex flight permissions to Texo APPLICATION BUSINESS HEADLINE NEWS UK ALEX DOUGLAS OCTOBER 9, 2018



Given the large fleet of drones used by the company, the Operating Safety Case (OSC) was formed around specific equipment and the technical complexity of flights in a variety of operating environments.

Permissions from the CAA include the ability to operate within 5

meters of any person, vehicle, vessel or structure, over or within 10 meters of a structure that has a height for more than 400ft and within 50 metres of an organized open-air assembly of more than 1,000 people. They also included extended visual line of sight (EVLOS) to 1,500 metres. http://www.commercialdroneprofessional.com/caa-awards-texo-industry-leading-flight-permissions/

150ct18

UAVOS ApusDuo Aircraft Successfully Completed Flight Tests October 12, 2018 News

UAVOS Inc. has successfully completed the first stage of the flight tests of the 10-meter prototype of the High Altitude Pseudo Satellite (HAPS) ApusDuo, which was manufactured as part of the development program of ApusDuo solar aircraft with a wing span of 28m.





That prototype was made for testing control algorithms, including take-off and landing, full-scale verification of HAPS aerodynamics. Test flights fully confirmed the flight characteristics of the UAV. <u>http://uasweekly.com/2018/10/12/uavos-apusduo-aircraft-successfullycompleted-flight-tests/</u>

A 12th-Century Relic Meets 21st-Century Technology James Barron Oct. 7, 2018



Curators enlisted a drone to survey damage to the Fuentidueña apse, which dates to the 12th century, at the Metropolitan Museum of Art's Cloisters in Northern Manhattan.

The apse is a soaring, handsomely proportioned structure that once held the altar of a chapel in Spain. It was packed up,

piece by piece, and delivered to the Cloisters in the 1950s. It filled more than 800 shipping crates.

It was rebuilt on a hillside above the Hudson River, and last week it came face-to-face with a 21st-century drone carrying a \$50,000 camera to inspect ancient stone for discoloration, pitting and cracking. The apse was made with two types of limestone. One is so porous that Ms. Kargère said it "imbibes" water. The drone made it easier to see into high-up crevices and peer at the figures on the corbels just under the roofline.



The drone survey will let Ms. Kargère compare the drone photographs to images taken in the 1990s. "It's like you're walking into a James Bond set," one Met official said, looking at the paraphernalia — a laptop, a portable monitor and extra batteries for the drone and the camera.

The idea was for the drone to rise about 30 feet, almost to

the top of the apse, hover about 12 feet out from the wall and work its way down, with the camera snapping photos along the way. The result will be thousands of images that will overlap. Software will knit them together.

The drone survey was faster than climbing up on a ladder. It did not take weeks, as a survey with a cherry picker did in the 1990s, and they did not have to think about putting up



scaffolding for extreme close-ups. <u>https://www.nytimes.com/2018/10/07/nyregion/a-12th-century-relic-meets-a-21st-century-technology.html</u>

BATTLE CREEK UNLIMITED GETS \$150,000 TO COURT DRONE MANUFACTURERS

NICO BERRIOS October 8, 2018



BCU <u>says in a release</u> that they were granted \$150,000 by the Michigan Economic Development Corporation, with most of that money going towards attracting manufacturers of Unmanned Aerial Vehicles.

BCU President and CEO <u>Joe Sobieralski</u> says that "We believe that autonomous aerial vehicles are the future of the aerospace

industry, and Battle Creek has the right assets in place to attract companies to the region."

This grant comes after **<u>Battle Creek Unlimited</u>** announced their new five-year strategic plan in August, which identifies growth in the Aviation & Defense sectors as some of their priorities.

This grant is a MEDC Defense Industry Growth Area Grant, which are intended to grow the "defense and homeland security sectors in <u>Michigan</u>".

http://wbckfm.com/battle-creek-drone-business/

Could drones be a big weapon against California wildfires? JOHN HIDAHL The

Sacramento Bee October 12, 2018. He represents District 1 on the El Dorado County Board of Supervisors and served on the board of the El Dorado County Fire Department for more than 30 years.



Helicopter crews work to stamp out the Ferguson Fire as it burns in Yosemite in August

After three of California's biggest wildfires ever, this year will likely mark the worst fire season in state history. As first responders and firefighters are stretched beyond capacity, we

need to focus on ways to improve response time and gather real-time information.

One way is to make sure that emergency responders have the most technically advanced tools available. With trained pilots, unmanned drones can operate in high temperatures, fly at night and in heavy smoke and get to the scene quicker than a fire engine.



The Interior Department flew nearly 5,000 drone missions over public land last year to minimize danger to human lives. More than 910 U.S. law enforcement, fire and emergency agencies have acquired drones, including several in California.

Regulators and local government officials should consider the benefits of drones. Local departments should explore partnerships and other avenues to ensure the latest technologies are at the ready for those on the front lines fighting these disasters. <u>https://www.sacbee.com/opinion/op-ed/soapbox/article219879940.html</u>

Phantom 4 RTK Launched Globally Today: DJI's Ultimate Mapping Solution Miriam

McNabb October 15, 2018



DRONELIFE was present this morning when <u>DJI</u> announced the global launch of the Phantom 4 RTK mapping and survey drone. At the European Drone Summit in Frankfurt, Germany, the new drone got a lot of attention from the crowd. "It's an impressive feature set," says DRONELIFE CEO Harry McNabb. "This new product is

clearly meeting a market need."



The Phantom 4 RTK is a drone focused on one of the major verticals for commercial drones: mapping and surveying. In <u>Skylogic</u> <u>Research</u>'s latest annual <u>report</u>, a survey of professional drone operators showed that DJI products – both hardware and softwarehold a dominant market share. The same report shows that the

majority of drone service providers earning over \$100,000 per annum are focused on mapping and surveying applications. <u>https://dronelife.com/2018/10/15/phantom-4-rtk-launched-globally-today-djis-ultimate-mapping-solution/</u>

Raytheon developing ground-based detect-and-avoid system for drones using current CNS/ATM equipment October 12, 2018 Philip Butterworth-Hayes Counter-UAS systems and policies, UAS traffic management news



Raytheon is close to completing the safety case for the company's Ground Based Detect And Avoid (GBDAA) system, used by the US Air Force and also demonstrated at Springfield-Beckley Municipal Airport in Ohio. The system uses existing air traffic data from multiple sources to provide Unmanned Aerial System (UAS) operators with real-time display of aircraft in the



surrounding airspace. It alerts operators to potential conflicts with neighboring aircraft and recommends avoidance maneuvers for UAS in the event that a conflict occurs.

The US Air Force has used GBDAA in place of ground observers or chase aircraft at Cannon Air Force Base in New Mexico to allow safe passage of UAS to a military operations area via civil airspace since 2014. Raytheon is currently installing the equipment at Beal Air Force base in California to eliminate a temporary flight restriction area, followed by Grand Forks base in North Dakota. A mobile version of the equipment was recently deployed in Ohio to support small UAS operating beyond visual line of site (BVLOS) in an area that extends some 200 square miles.

The Volpe Centre is supporting deployment of the mobile version of GBDAA for the joint project between US Air Force Research Labs and the State of Ohio. The program is building a safety case for the FAA and providing a mobile command center able to respond in the case of a natural disaster.

The system leverages existing NAS radar equipment and infrastructure to locate surrounding aircraft and can also take feeds from infill radar designed to track small UAS. Conflicts are brought to the attention of the controller using three levels of alert with visual and audio alarms. The mobile unit features a data link capability that enables position data based on GPS information to be sent by UAS operators to the command unit.

https://www.unmannedairspace.info/counter-uas-systems-and-policies/raytheon-developing-ground-baseddetect-avoid-system-drones-using-current-cns-atm-equipment/

Startup launches crowdfunding campaign to change drone pilot gender gap

APPLICATION BUSINESS FINANCIAL HEADLINE NEWS INTERNATIONAL PEOPLE VIDEO ALEX DOUGLAS OCTOBER 15, 2018



US-based start-up Women who drone (WWD) has launched a crowdfunding campaign to help build and grow its global influence.

The company wants to change the fact that less than 4% of certified drone pilots worldwide are female. Since its beginning *Women who drone* has grown and now has brand

ambassadors across the globe with the aim to inspire, educate and empower more women to learn to fly drones, obtain licenses, and join the drone industry.





WWD recently celebrated its one year anniversary and released a video asking for donations to help expand the brand. WWD is also hosting workshops in the coming weeks to give drone pilots the chance to build on their skills and welcomes both men and women. Watch the video which gives further insight into the company here:

<u>http://www.commercialdroneprofessional.com/startup-launches-crowdfunding-campaign-to-change-drone-pilot-gender-gap/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-279097-</u> <u>Commercial+Drone+Professional+DNA+-+2018-10-15</u>

160ct18

DRONE FEES, NEW RULES EXPECTED October 15, 2018 By Jim Moore FAA GAINS AUTHORITY OVER HOBBYISTS

A new law signed Oct. 5 authorized FAA operations into 2023 and removed constraints on the regulation of recreational drones. It also set the stage for the agency to charge remote pilots for services, and for expanded commercial operations as well as drone enforcement.



The new law closed the "hobbyist loophole" that precluded the FAA from establishing limits such as the 400-foot ceiling previously imposed only on certificated remote pilots. For hobbyists and recreational fliers, 400 feet is no longer a suggestion; it is a hard limit.

Several prohibitions in the new federal law target drone operations, subject to penalties: Firing a gun or other dangerous weapon is now against the law, along with any commercial operation that violates a privacy policy, operations in a restricted area, interfering with emergency responders, and interfering with manned aviation including drone flights close to an active runway.

The <u>43 drone-specific sections</u> in the 1,200-page law do not spell out every new rule in detail, but they do set the stage for major changes ahead. The new law directs the FAA and Government Accountability Office to study how the federal government could raise money to pay for drone-related services, including a future unmanned aircraft system traffic management program (UTM) that will be a key to facilitating large-scale use of unmanned aircraft for package delivery and other operations beyond visual line of sight.

Revenue will be required to implement UTM on a large scale, and that is likely to come from fees charged for air traffic services. A study of the how fees might be charged to pay for



oversight and air traffic control services for unmanned aircraft is due from the GAO in six months.



Congress repealed prohibitions on FAA regulation of hobby drones.

Congress also directed the FAA to update its plan for integrating unmanned aircraft into the National Airspace System and establish a new pilot program toward that end, which would be a follow-up of the <u>Integration Pilot</u> <u>Program</u> currently underway, with advanced operations (including BVLOS

flights) taking place at locations around the country.

The agency was given several deadlines, including one-year to allow commercial drone deliveries that comply with economic regulations; the FAA is also required to publish within 30 days a representative sample of safety justifications that commercial operators can use to obtain waivers and authorizations; and revise that waiver application process within 90 days to provide real-time confirmation of application receipt and status. (https://www.aopa.org/news-and-media/all-news/2018/october/15/drone-fees-rules-expected?utm_source=drone&utm_medium=email&utm_campaign=181016drone

VIDEO: Drone footage used to capture aftermath of Storm Michael APPLICATION DRONES AT WORK EVENTS INTERNATIONAL NEWS VIDEO ALEX DOUGLAS OCTOBER 16, 2018



News organisations around the globe have been using drone footage to show the world the damage caused by Storm Michael.

UAVs were also used by first responders and emergency services as part of the rescue mission.

But, despite the value of drones in these situations, <u>CDP reported yesterday on an FAA</u>

warning which told drone pilots to stay away from disaster hit areas so not to interfere with the rescue missions taking place.

Watch this week's drone footage, as shown by NBC News, which captures the destruction caused by the Storm. <u>http://www.commercialdroneprofessional.com/video-drone-footage-used-to-capture-aftermath-of-storm-michael/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-279338-Commercial+Drone+Professional+DNA++2018-10-16</u>





Elite UAV pilot fears US is 'not ready' to defend against progressive drone

industry COUNTER-DRONE HEADLINE NEWS MILITARY UNITED STATES ALEX DOUGLAS OCTOBER 16, 2018



An Elite drone pilot has described how he thinks airborne threats are 'outpacing' US defenses.

Brett Velicovich, who now advises government officials on how to defend against drones, thinks the technology in place isn't sufficient to successfully fend off an attack.

According to a report by Fox News, FBI and Homeland

Security officials have recently told the senate that the US is still a long way behind when it comes to a potential domestic attack from a commercial drone.

Velikovich told Fox News: "The technology that exists now isn't capable of successfully taking down drones at the rate it needs to be, so the bill won't matter, but it's a good beginning. The same stuff that's available to consumers is the kind of tech I wished I would've had in the military. Drone manufacturers are creating things that defeat these millions of dollars of equipment that the government uses to help combat the problem, so it's a constant back-and-forth between government agencies that see the threat, and these manufacturers just trying to make money." <u>http://www.commercialdroneprofessional.com/elite-uav-pilot-fears-us-is-not-ready-to-defend-against-progressive-drone-industry/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-279338-Commercial+Drone+Professional+DNA+++2018-10-16</u>

Bell and Yamato to Develop Autonomous VTOL Delivery Drones 15 Oct 2018 Mike Rees



Bell Helicopter and Yamato

Holdings have announced that the two firms have entered into a strategic collaboration for the future of civilian aerial logistics. Together they are aiming to develop electric vertical take-off and landing logistics and plan to do so by collaborating to integrate innovative autonomous unmanned vehicle systems







and package handling systems to create on-demand logistics services. They expect to introduce their initial product into service by mid-2020s.

For the initial demonstration activities, Bell will lead the design, development and production of its Autonomous Pod Transport (APT), and Yamato will develop a customized detached pod, highlighting future ground-handling capabilities. The companies' goal is to demonstrate the integration of the existing ground logistics network with vertical lift capabilities to provide new and innovative services to their customers.

https://www.unmannedsystemstechnology.com/2018/10/bell-and-yamato-to-develop-autonomous-vtol-deliverydrones/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=1387937f47eBrief_2018_Oct_16&utm_medium=email&utm_term=0_6fc3c01e8d-1387937f47-119747501

New Parachute Rescue Systems Introduced for Multicopter UAVs 14 Oct 2018

Mike Rees



Drone Rescue, a developer of parachute systems for unmanned aerial vehicles has announced the launch of its latest systems. The DRS-5 system is designed for multicopters with a total weight of up to 8 kg. The system consists of a carbon cage in which the parachute is stored, as well as the associated electronics. These electronics, including the sensors, monitor the flight status of a drone, independent of

the flight controller. A sophisticated algorithm merges this sensor data and reacts faster than the pilot, ejecting the parachute. All flight data and movements are recorded in a Black Box. In an emergency these can be read out at the request of the customer and made available to insurance companies or authorities.

"Our goal is to ensure, that even in an emergency Beyond Visual Line of Sight the drone can be safely intercepted. Our system has the advantage that it manages completely without explosive, pyrotechnical solutions. Consequently, we have a system that is considerably lighter and functions even in a worst case scenario," elaborated Andreas Ploier, CEO and co-founder of Drone Rescue Systems GmbH. <u>https://www.unmannedsystemstechnology.com/2018/10/drone-rescue-unveils-new-parachute-rescue-systems-for-multicopters/</u>





How drones may help rebuild monuments destroyed in Syria October 16,

2018 Feilidh Dwyer



A French startup is using drones paired with 3D technology to recreate digital representations of monuments destroyed during the war in Syria.

The group, called Iconem, has been operating since 2013 and specializes in the digitization of endangered cultural heritage sites in 3D. These representations are not only a way of

preserving sites that are lost but can also be used as a basis for rebuilding the monuments once there is sufficient peace in the region to do so.

Syria's civil war began in 2011 between the Assad-led government and multi anti-government, rebel groups. Along with the horrific human misery caused by this war, many world heritage sites have been destroyed either by ISIS or during clashes between rebel groups and the government.



monuments destroyed in Syria's civil war

A photo of the obliteration wrought on Syria in the Northern town of Kobani.

The team of digital archaeologists led

by UNESCO fly their drones over historical sites that are either under threat or have already been partially or completely destroyed. They then take hundreds of thousands of digital images Next, their algorithms process the photographs to produce 3D reconstructions of the sites and refer to source material of the monuments before they were destroyed.



Left, the current state of a destroyed monument in Syria. Right, the digital recreation enabled by Iconem

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Aside from their work and Syria, Iconem is working with UNESCO on a project in Iraq called: 'Revive the Spirit of Mosul," another city ravaged by war that has lost many of its historical sites.

Iconem is also working with French video game company, Ubisoft on an immersive virtual reality experience which allows consumers to explore the digital reconstructions. <u>https://www.wetalkuav.com/drones-helping-rebuild-destroyed-monuments/</u>

MTSI, NASA to Work on Autonomous Aircraft Framework under Space Act

Agreement Jane Edwardson: October 16, 2018In: News, Space

<u>Modern Technology Solutions Inc.</u> and <u>NASA</u> have agreed to team up to build a framework that could be used to secure certification from the <u>Federal Aviation Administration</u> for autonomous aircraft systems. MTSI <u>said Monday</u> it will work with the agency's Armstrong Flight Research Center on NASA's *Traveler Project* under the two-year *Space Act Agreement*.



"MTSI has partnered with NASA on autonomous system development and certification for over 20 years, and this agreement represents a great opportunity to cooperatively develop and transition key technologies that will have a positive impact on next generation aviation," said MTSI CEO Kevin

The Traveler Project, also called *Resilient Autonomy*, aims to create an architecture for certifying autonomous systems through the use of the multimode run-time assurance technique that works to place a "wrapper" around the unmanned system's nondeterministic software to bind the untrusted platform's behavior.

"Unlike traditional manned platforms, operators of autonomous systems are uncertain how to obtain certification for platforms that utilize non-deterministic algorithms or artificial intelligence," said Russell Wolfe, MTSI vice president of engineering. "Partnering with NASA to develop a novel methodology and architecture for supporting certification of these types of platforms enables MTSI to play a substantive role in helping to overcome one of the largest challenges inhibiting this bourgeoning new market from becoming a reality." https://blog.executivebiz.com/2018/10/mtsi-nasa-to-work-on-autonomous-aircraft-framework-under-space-act-agreement-kevin-robinson-quoted/





170ct18

Company gets FAA permission to fly drones without direct human supervision in

W. Texas Andrea Leinfelder October 16, 2018



A multirotor drone is used by Arch Aerial for a flight over a pipe rack at Thermal Energy Corporation in Houston.

Avitas Systems, a GE venture, is the first company to receive federal approval to fly drones for non-governmental uses without the direct supervision of humans. It will use this technology to monitor infrastructure in the Permian Basin in

West Texas.

The Federal Aviation Administration generally requires drones to remain in a person's line of sight. But Avitas Systems has received permission to fly drones with the use of radar rather than a human spotter.

"With the FAA's approval and with the assistance of Avitas Systems, we can fly over a larger area of our Permian Basin operations to conduct aerial monitoring of our oil and gas infrastructure," Bruce Culpepper, U.S. country chair for Shell, said in a news release.

Avitas Systems uses predictive data analytics, robotics and artificial intelligence for inspection and risk assessment services. According to the news release, its drone radar system and enhanced operational procedures will provide the same level of safety as a human spotter.

The FAA confirmed that this is the first civil use, meaning non-governmental use, approved to fly with radar rather than a human spotter. But it isn't the first commercial use. <u>The Northern</u> <u>Plains Unmanned Aircraft Systems Test Site in North Dakota</u> received permission to fly with radar rather than a human spotter more than two years ago. https://www.chron.com/business/bizfeed/article/Company-receives-FAA-permission-to-fly-drones-13311068.php

PAE ISR to Demonstrate Resolute Eagle UAS Under NASA Agreement Nichols

Martinon October 17, 2018 Featured, General, Industry News, News

PAE ISR and <u>NASA</u> have agreed to demonstrate the *Resolute Eagle* unmanned aircraft system within the National Airspace System in 2020 in support of an effort to fully integrate UAS into the country's skies. The company <u>said it will work with other firms such as Fortem</u>



Technologies, Pathfinder Systems and Sagetech to integrate detect-and-avoid technologies into the aircraft.

"Our engineering team will conduct a study of radar, acoustic and optical technologies for trade-offs in size, weight, power and performance," said Jake Jacobs, chief technology officer at PAE ISR who leads the NASA program. The UAS also has a 75-pound payload capacity and a very low acoustic signature



Beth Beach, vice president of business development at PAE ISR, added the company will collaborate with the two agencies to address UAS certification challenges and come up with an operational procedure for pipeline inspection. The Resolute Eagle is designed to deliver a variety of functions for military, homeland security, law enforcement, commercial and humanitarian applications.

https://blog.executivebiz.com/2018/10/pae-isr-to-demonstrate-resolute-eagle-uas-under-nasaagreement-beth-beach-guoted/

Drone Ambulances to the Rescue Oct 16, 2018 Jeanette Beebe, Next Avenue Contributor



According to a <u>recent analysis</u> of over 1.8 million 911 calls, callers in rural areas wait twice as long for an ambulance than elsewhere. That's a 13minute wait in the country vs. a six minute wait in the city or suburbs. 10% of folks in rural areas had to wait a full 30 minutes for an ambulance to arrive.

A Mississippi-based team of doctors is working on a telemedicine technology that could get emergency care to rural areas faster. It's a drone named HiRO, which stands for Health Integrated Rescue Operations. With the potential to integrate into local emergency 911 systems, each drone carries a medical kit that can help bystanders — family members, neighbors or even you — provide simple medical care until emergency help arrives.

In addition to medicine and supplies stored in small bins that can be unlocked remotely, the drone's medical kit contains an augmented reality interface that acts as a direct link to a remote, on-call doctor. Once you put the googles on, the doctor can see what you see.

The kits can vary from two to 20 pounds, depending on their purpose. The heaviest kits are meant for mass-casualty events (bioterrorism, mass shootings) and disasters that displace or endanger many people (earthquakes, hurricanes). Smaller kits are more appropriate for search-





and-rescue missions in remote areas, including wilderness emergencies. <u>https://www.forbes.com/sites/nextavenue/2018/10/16/drone-ambulances-to-the-rescue/#6cdfb3bd5309</u>

Aviation expert: New Zealand must update its drone regulations before tragedy

OCCURS October 15, 2018 Feilidh Dwyer



There have been five recent incidents at airports around New Zealand which caused significant delays or diversions of airplanes.

Current laws forbid flying drones within four kilometers of an airport or helipad, and if you wish to do so, you need permission from the

Civil Aviation Authority. It is currently very difficult for authorities to identify who drone perpetrators are, and New Zealand is not equipped to deal with a drone when it goes rogue. Research recently conducted in New Zealand on behalf of the CAA revealed that only 55 percent of NZ drones users were aware of the country's drone rules.

Andrew Shelly said the best way New Zealand can defend against unwanted behavior by errant drone users is adopting anti-UAV systems. There are multiple technologies that fall within this description, perhaps the most famous of which is drone killer devices which interrupt the connection between drones and their pilots and cause the drone to either return to their home point or land.



A solution for poorly behaving drones? DroneShield's badass-looking drone killer device.

It can also be GPS jammers or even special grenades that knock the drones out of the sky. As the law currently stands in New Zealand,

drones are not considered differently to normal airplanes, meaning authorities are limited in what action they can take against a misbehaving drone. <u>https://www.wetalkuav.com/new-zealand-must-update-its-drone-laws-before-a-tragedy-occurs/?utm_source=WeTalkUAV&utm_campaign=f854582860-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_1d410cb84d-f854582860-83642867</u>



180ct18

FLIR, DroneSense Offer UAS Flight Management Software for Public Safety Betsy

Lillian October 17, 2018



FLIR Systems Inc. has announced the DroneSense–FLIR Edition, an unmanned aircraft system flight management software platform designed for public safety applications.

The software - designed to help improve incident response for public safety organizations – combines thermal and visual imaging processing with flight data planning and management capabilities.

Thermal sensor data is streamed directly into the software. It includes features such as autonomous flight control, live video streaming, and drone asset and compliance management capabilities. The platform is hosted on a secure government cloud server and enables real-time data interpretation for a variety of drones and use cases.

It can be connected via Wi-Fi or cellular networks with multiple feed streaming capabilities or can be used as a stand-alone, independent communications remote ad-hoc network with automatic logging and syncing of all flight data. <u>https://unmanned-aerial.com/flir-dronesense-offer-uas-flight-management-software-for-public-safety?utm_medium=email&utm_source=LNH+10-18-2018&utm_campaign=UAO+Latest+News+Headlines</u>

Startup plans to launch small satellites from Virginia coast BEN FINLEY October 17, 2918



NORFOLK, Va. (AP) — A California-based startup said Wednesday that it will rocket small satellites into orbit from Virginia.

Rocket Lab said it will build its launch pad at the Mid-Atlantic Regional Spaceport on the Eastern Shore. It's located at NASA's Wallops Flight Facility where unmanned cargo missions already are dispatched to the International

Space Station. As small as a loaf of bread, the devices circle the earth for a few years before burning up in the atmosphere. Atlanta-based consulting firm SpaceWorks predicted in January that up to 2,600 of these will need to be launched into orbit over the next five years.



Rocket Lab has sent up two rockets so far, humorously calling those missions "It's a test" and "Still testing." The second rocket successfully reached orbit in January. Rocket Lab's next commercial mission, known as "It's Business Time," is scheduled to lift off from New Zealand in November. Launches from Virginia are set to begin as early as summer 2019. https://apnews.com/96740e1014be45a199752fc0d8d9df33

Europe's Plan to ID and Monitor Drones - and Why the Drone Industry

Approves Miriam McNabb October 17, 2018



The European Commission published its <u>latest draft of detailed drone</u> <u>rules</u> last week. Here's what's inside: and why the <u>Drone Manufacturers</u> <u>Alliance Europe (DMAE</u>) is on board.

The Commission's latest draft builds on EASA recommendations and proposes a groundwork that will grant member states the ability to implement security measures as they see fit – but allows for cooperation and exchange of information that will help support the industry across Europe.

The proposed framework is centered around risk-based regulations and proposes three categories of operations: "open", "specific", and "certified." "The rules and procedures applicable to UAS operations should be adapted to the nature and risk of the operation or activity, the operational characteristics of the unmanned aircraft concerned and the characteristics of the area of operations such as the population density, surface characteristics, and the presence of buildings," says the draft. "...Proportionate risks mitigation requirements should be applicable to UAS operations according to the level of risk involved, the operational characteristics of the unmanned aircraft concerned and the operational characteristics of the unmanned aircraft concerned of risk involved, the operational characteristics of the unmanned aircraft concerned and the characteristics of the area of operations."

The draft is geared towards full integration of unmanned aircraft, and incorporates requirements of "<u>U-Space</u>," Europe's Unmanned Traffic Management (<u>UTM</u>) system. "While the "U-Space" system including the infrastructure, services and procedures to guarantee safe UAS operations and supporting their integration into the aviation system is in development, this Regulation should already include requirements for the implementation of three foundations of the U-Space system, namely registration, geo- awareness and remote identification which will need to be further completed," says the draft. Additionally, the proposal says that drone registrations should be stored in "digital, harmonized, interoperable national registration systems" which could be shared between member states. https://dronelife.com/2018/10/17/europes-plan-to-id-and-monitor-drones-and-why-the-drone-industry-approves/



Central Colorado UAS Club Celebrates One Year of Drone Advocacy Betsy Lillian

October 17, 2018



This week, the <u>Central Colorado UAS Club</u> is celebrating its first anniversary following a year of promoting the safe operation of unmanned aircraft systems.

"Our inaugural meeting was last Oct. 21, and since then, we have enjoyed great membership growth, extraordinary community

support and statewide recognition," says Taylor Albrecht, club president. "We now have 30 members in the club – a fantastic achievement." Meeting on the first Saturday of each month, the group also conducts educational seminars and hosts community outreach programs.

"Chaffee County is leading the charge to incorporate UAS technology into the economic landscape," notes Wendell Pryor, director of the Chaffee County Economic Development Corp. "Ours is first and only in the nation to create a county advisory board for this technology. The club is an important aspect of this ecosystem. In addition, Part 107 pilot training ground schools are offered in the county, which has increased the number of qualified drone pilots for commercial purposes."

"We were blessed to have several corporate sponsors help us get off the ground financially, including Anderson & Hughes P.C., the Upper Arkansas Water Conservation District, TNL Aviation and the county advisory Board," adds Taylor Albrecht. <u>https://unmanned-aerial.com/central-colorado-uas-club-celebrates-one-year-of-drone-advocacy?utm_medium=email&utm_source=LNH+10-18-2018&utm_campaign=UAO+Latest+News+Headlines</u>

Drones Inspect U.S.' First Offshore Wind Farm Betsy Lillian October 15, 2018



The unmanned aircraft system used for the inspection of the five wind platforms off Block Island, R.I., was developed by ULC Robotics, which used a marine vessel for takeoff and landing.

The aircraft was outfitted with a high-resolution DSLR

camera to capture detailed imagery of the turbines' support structure and welds. Engineers from Keystone Engineering Inc., which designed the foundations for Deepwater Wind, then used the drone-captured data to deliver an accurate and fast assessment of the platforms. The





imagery and data obtained during these flights will be used as a baseline for comparative data following future flights.

"Conventional inspection typically requires a team of engineers to board the platform and use a series of ladders to climb to the platform," says Captain John O'Keeffe, manager of operations and maintenance and marine affairs at Deepwater Wind. "Using drones, ULC Robotics' aerial services team was able to deliver more detailed data without the risks associated with climbing up to the platform, improving the safety of our team." <u>https://unmanned-aerial.com/drones-inspect-u-s-first-offshore-wind-farm?utm_medium=email&utm_source=LNH+10-18-2018&utm_campaign=UAO+Latest+News+Headlines</u>

Five Days, 100 Miles of Power Lines for Honeywell's UAV Inspection

Service Betsy Lillian October 12, 2018



Honeywell says its unmanned aerial vehicle (UAV)-based inspection service helped Arkansas-based utility Ozarks Electric Cooperative inspect more than 100 miles of power lines and provide actionable data in only five days.

Inspecting the same distance can take approximately two weeks with up to 15 employees when performed on foot. It can take one day by helicopter, but this can add a higher safety risk and cost and provide lower-quality data.

Honeywell's UAV service uses a three-step process to conduct inspections and deliver data analytics for customers: During the first phase, Honeywell works with the customer to plan the inspection and finalize the drone's flight plan, ensuring it complies with Federal Aviation Administration regulations. Next, Honeywell's remote pilots perform the inspection using autonomous flight management software, capturing thousands of images and raw data along the way. Finally, the imagery is run through Honeywell's proprietary data analytics software, which is specially designed to sort, organize and tag the inspection data. This software then uses machine learning algorithms to identify potential hazards – such as vegetation encroachment or hardware defects – and prioritizes them based on how urgently they need attention. Once this process is complete, all of the imagery and findings are delivered to the customer via a Web portal that can be accessed in the field or back in the office. https://unmanned-aerial.com/five-days-100-miles-of-power-lines-for-honeywells-uav-inspection-service?utm_medium=email&utm_source=LNH+10-18-2018&utm_campaign=UAO+Latest+News+Headlines





DJI Rolls out Phantom 4 RTK Surveying Drone Betsy Lillian October 17, 2018



DJI has <u>announced</u> the global rollout of the Phantom 4 RTK, a high-precision drone designed for surveying, mapping and inspection. According to DJI, a real-time kinematic (RTK) module is integrated directly into the drone, providing real-time, centimeter-level positioning data.

A non-RTK drone requires up to 40 ground control points (GCPs)

per square kilometer, which can take several hours to place, explains DJI. On the other hand, the new drone's features potentially reduce the number of GCPs needed to zero. Sitting beneath the RTK receiver is a redundant GNSS module, installed to maintain flight stability in signal-poor regions, such as dense cities.

The RTK module can provide positioning accuracy of 1cm+1ppm (horizontal) and 1.5cm+1ppm (vertical). In addition, the drone can get 5-centimeter absolute horizontal accuracy of photogrammetric models.

To take full advantage of the Phantom 4 RTK's positioning modules, a new TimeSync system was created to continually align the flight controller, camera and RTK module. Additionally, it ensures that the aircraft records factory-calibrated lens parameters alongside position, altitude and other data onto each photo, matching the positioning data to the center of the camera's CMOS sensor and thus optimizing the results from photogrammetric methods.

The drone is equipped with a 1-inch, 20-megapixel CMOS sensor. A mechanical shutter allows the Phantom 4 RTK to move while taking pictures without the risk of rolling shutter blur. Due to the high resolution, the Phantom 4 RTK can achieve a ground sample distance (GSD) of 2.74 cm at a flight altitude of 100 meters.

In areas with a lack of RTK coverage, the DJI Phantom 4 RTK allows for the use of post processed kinematics (PPK). It captures original satellite observation data, as well as the ephemeris data, and stores it in a file in RTCM 3.2 format. Additionally, the drone converts the satellite data on the fly to RINEX format and writes the data into a RINEX.obs file. All operation-relevant data is stored on a Micro-SD card in a folder for each mission. <u>https://unmanned-aerial.com/dji-rolls-out-phantom-4-rtk-surveying-drone?utm_medium=email&utm_source=LNH+10-18-2018&utm_campaign=UAO+Latest+News+Headlines</u>

