UAS and SmallSat Weekly News

Contents

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

Page 1

UAS and SmallSat Weekly News

8Feb20

vHive Launches New AI Driven Capabilities to Accelerate Tower Inspections
February 5, 2020 Mapping and Surveying | News

 vHive, the only software solution that enables enterprises to digitize their field assets and operations using autonomous drone hives, announced today the release of an AI driven Auto Discovery™ capability for simplifying and shortening data acquisition in communication tower inspections.

"Tower companies require a scalable level of automation as part of their digital transformation process. vHive's software adds contextual awareness to off-the-shelf drones, enabling the system to capture data on assets without needing to know their precise location or orientation a-priori", said vHive Co-Founder and CTO, Tomer Daniel. "Our new software enables enterprises to further improve the quality of the data captured as well as to shorten time in the field, save costs and provide an overall easy user experience that enables field technicians to use drones as another "tool" in their toolset."

"The introduction of vHive's unique Auto Discovery™ technology is an important milestone in realizing vHive's leadership in the autonomous drone hives domain. vHive has attracted a customer base of Fortune 500 companies in the communication tower industry, who use our software platform to conduct tens of thousands of surveys and improve their business intelligence." https://uasweekly.com/2020/02/05/vhive-launches-new-ai-driven-capabilities-to-accelerate-tower-inspections/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_02_06_2020&utm_term=2020-02-06

Coronavirus may boost deliveries by drone Haye Kesteloo Feb. 6th 2020

 The coronavirus may turn out to boost deliveries by drone. The spreading virus and fears of contagion have made it more difficult and costly for companies such as Alibaba to deliver their products to customers. Making such deliveries by drone and thus reducing human contact might offer a solution.

Since the Lunar New Year holiday in late January, millions of people in China have been stuck in their homes. The spreading of the coronavirus has led to people being quarantined, travel restrictions, and even citywide shutdowns. Many businesses, including companies such as DJI,

have closed their offices, and stores such as Apple, Starbucks, and others have been closed. As a result, postal deliveries have gone up substantially compared to last year's festival period.

However, delivering products to customers still carries a risk of contagion, and to ease the fears of customers, companies such as Alibaba and Meituan Dianping now offer "contactless delivery," where couriers leave the packages at designated pickup locations. At the same time, fewer people are willing to make these deliveries out of fear of the coronavirus spreading, and labor costs are likely to increase. One solution that comes to mind (no surprise here) is to start using drones to make contactless deliveries. https://dronedj.com/2020/02/06/coronavirus-may-boost-deliveries-by-drone/

Coronavirus fight turns to drone tech for medical deliveries APPLICATION DELIVERY
HEALTH ALEX DOUGLAS FEBRUARY 7, 2020

A medical delivery drone flying from the people's Hospital of Xinchang County to the disease control center marks the launch of the first "urban air transportation channel" to help to fight the corona virus.

Xinchang County is located in Zhejiang province, one of the most severely hit 1,006 patients confirmed as of February 6.

Antwork contacts local hospitals, supports epidemic prevention, cooperates with local governments and medical units, and provides rapid delivery of medical samples and protection materials through its drone network.

It was used to transport medical samples and quarantine materials between Xinchang County People's Hospital, Xinchang County disease control center and Dashiju branch of Xinchang County People's Hospital. https://www.commercialdroneprofessional.com/coronavirus-fight-turns-to-drone-tech-for-medical-deliveries/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-323238-Commercial+Drone+Professional+DNA+-+2020-02-07

Drone Delivery Canada to offer showcase at AutoShow's 'Future Tech Hub'
APPLICATION DELIVERY EVENTS INTERNATIONAL NEWS ALEX DOUGLAS FEBRUARY 7, 2020

Drone Delivery Canada has been invited to display the Sparrow, the Robin and the Condor delivery drones at the Canadian International AutoShow's Future Tech Hub on the main manufacturer floor on the

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

Page 3

800 level in the South Building of the Metro Toronto Convention Centre downtown Toronto. It will bring together several elements that offer a glimpse into the future of transportation. It runs from February 14th to 23rd.

Commenting on the invitation, Michael Zahra, president and CEO of DDC, said: "Technology is changing the way we do almost everything, and some of those impacts will be encapsulated in the Future Tech Hub, a special installation at the AutoShow showcasing some of the new and innovative technologies transforming the world of transportation."https://www.commercialdroneprofessional.com/drone-delivery-canada-to-offer-showcase-at-autoshows-future-tech-hub/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-323238-Commercial+Drone+Professional+DNA+-+2020-02-07

Drones to fly above Australia's beaches this summer Josh Spires Feb. 7th 2020

Are you going to the beach this summer and happen to be in Australia? Look up, you might see a drone flying around keeping an eye on swimmers, looking out for sharks, or helping out with rescue efforts. The drone will be yellow and red — the colors of lifesaving — to make sure it stands out.

The news comes from CASA's *Flight Safety Australia* magazine, outlining the use of drones at some of Australia's most popular beaches this summer. The drones flying above will be used for safety, surveillance, and search-and-rescue operations along with sports videos.

The drones will be flown by new lifeguards on land who won't enter the water and aren't required to have any particular swimming ability. Some pilots have a background in aviation, including Qantas A380 pilots, and others don't have any background in aviation. The pilots are required to undergo a two-day training session in drone operations and safety. https://dronedj.com/2020/02/07/drones-fly-above-australia-beaches-summer/

9Feb20

UK coastguard looks into drones for Search and Rescue Josh Spires - Feb. 6th 2020

A new project announced on Wednesday by the UK Maritime and Coastguard Agency will explore how current laws and regulations can be developed to allow search and rescue

drones to be used to in coastline rescues. The drones will reach incidents first and relay critical information back to the MCA headquarters.

The successful outcome of the project would allow the Maritime and Coastguard Agency to respond to rescue before other air, ground, or water units would. The drones would then take high-quality footage of the scene to relay back to the MCA headquarters where a plan of attack would be created.

Maritime Minister Nusrat Ghani had the following to say on the potential for the drones in terms of saving people and spotting environmental hazards. *Drone technology has enormous potential for our search and rescue teams, who save lives 24 hours a day, seven days a week. This ground-breaking project will not only hope to boost the capabilities of our already fantastic teams but will also boost our ability to spot pollution hazards and protect our precious marine environment.*

Last year the MCA search and rescue helicopters responded to seven missions per day on average and saved 1,600 people. Overall the MCA coordinated 22,000 incidents and saved a total of 7,000 people. https://dronedj.com/2020/02/06/uk-coastguard-drones-search-rescue/

10Feb20

Northrop Books $172M Navy Triton UAS Production Contract Modification
Brenda Marie Rivers February 7, 2020 News

Northrop Grumman has received a four-year, $172.4M contract modification from the U.S. Navy to produce and deliver two unmanned air systems designed for maritime intelligence, surveillance and reconnaissance missions.

The company will build MQ-4 Triton UAS units and a main operating base for the vehicles as well as perform trade studies and provide related administrative and technical data. Naval Air Systems Command will obligate the full amount of the modification from the service branch's fiscal 2020 aircraft procurement funds.

Contract work will take place at various locations within and outside the continental U.S. through January 2024. https://www.govconwire.com/2020/02/northrop-books-172m-navy-triton-uas-production-contract-modification/

U.S. Divided Over Chinese Drone Bans David McCabe Feb. 7, 2020

WASHINGTON — Federal agencies are split on how best to handle national security concerns surrounding popular and ubiquitous Chinese-made drones, with some policymakers chafing at more protectionist approaches.

The Department of the Interior, which uses drones for tasks like wildlife conservation and the monitoring of the state of infrastructure, grounded all those made in China or built with Chinese parts in October. It reaffirmed that decision in January, saying its entire fleet of 810 drones would essentially remain out of commission until it can confirm they pose no security threat.

The Trump administration has engaged in a steady campaign to wall off America from Chinese technology, saying the Chinese government could use it to spy on the United States. Their efforts have been cheered on by members of Congress from both parties, many of whom have written legislation that would restrict China's ability to operate in the United States.

But the debate over drones, which are primarily made either in China or with Chinese parts, shows how attempts to "decouple" America from Chinese industry can crash into the realities of the global tech supply chain.

"Decoupling isn't like a magic wand where you just say, 'We're not going to use these people anymore,'" said James Lewis, the director of the Technology Policy Program at the Center for Strategic and International Studies. https://www.nytimes.com/2020/02/07/technology/us-china-drone-ban.html?auth=linked-google1tap

FAA Exploring How Manned Aviation Can Benefit from Drone Remote ID Brian Garrett-Glaser February 7, 2020

The Federal Aviation Administration is planning to ask industry how manned aviation can interact with remote identification signals emitted by drones as part of its roadmap to integrating unmanned aircraft into the national airspace.

"We are in discussion inside the FAA about producing a request for information on how manned aviation could take advantage of remote identification signals," Jay Merkle, director of the FAA's UAS integration office, said at an event hosted by the Royal Aeronautical Society. "At

Page 6

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

the moment, we're a little busy with remote identification and getting that implemented. We hope to do that early this year, but it's still on our plate."

In December, the agency released its proposal for remote ID, which would require most drones to transmit identifying information — serial number, location of the drone, location of its operator — via both broadcast and an internet connection. The proposal, which the agency expects will take 18-24 months to finalize, has generated more than 10,000 formal comments. https://www.aviationtoday.com/2020/02/07/faa-exploring-manned-aviation-can-benefit-drone-remote-id/

FREE REPORT: UAS for Construction & Engineering

Roundtable Report

As part of 2019 Commercial UAV Expo Americas, high-level players operating within the commercial UAV space met in a series of closed-door roundtable discussions. Each discussion focused on a key industry vertical and the challenges that each industry was facing.

The Construction & Engineering roundtable had extensive experience working through the challenges of operating within federal and state restricted airspace near/in places like airports, military bases, and other government assets. They talked candidly about navigating approval processes, dealing with restrictions on Chinese manufactured drones, and the challenges associated with the general ignorance within the industry about proper operational drone procedure. Discussions revolved around:

o   Working in government airspace

o   Dealing with local FAA airspace restrictions

o   Ignorance within the industry

Fill out the short form to the right to gain access to these expert opinions. https://discover.divcom.com/uava20-construction-engineering-roundtable-report.html?utm_source=marketo&utm_medium=email&utm_campaign=uav-roundtables-const-2-3&utm_content=digital

FAA Proposes 'Special Class' for Delivery Drones Mark Huber February 5, 2020

The FAA is seeking public comment on a proposal to certify drone delivery UAS as a "special class" of aircraft under FAR 21.17(b). The agency said this did not preclude type certifying these aircraft under FAR 21.17(a) "when appropriate." It will also "announce and seek public

comment on the particularized airworthiness criteria for each applicant as certification standards for this new special class evolve" and will "issue rulemaking or publish standards as guidance in an advisory circular" once generally-applicable standards are identified.

According to the FAA, this policy is consistent with its handling of certification of other special classes of aircraft including gliders, airships, and very light airplanes. The FAA said the special class designation for UAS is appropriate as these aircraft contain "the very unique, novel, and/or unusual features the special class category was designed to accommodate" such as launch and recovery systems and unique "configurations and applications of airframes, powerplants, fuels, and materials are possible and can result in flight characteristics different from those of conventional aircraft." Comments are due by March 4.
https://www.ainonline.com/aviation-news/general-aviation/2020-02-05/faa-proposes-special-class-delivery-drones

Drones for parcel and passenger transportation: A literature review

RobinKellermann[a]TobiasBiehle[a]LiliannFischer[b]

 Conclusion

Our analysis of 111 interdisciplinary publications examining the subject of drones revealed that since 2013 the discussion about a potential use of delivery and passenger drones has flourished, particularly in academia. Overall, we found that the current development is driven by a clear expectation of economic benefits, which is flanked less prominently by rather generalized expectations of societal and environmental improvements. More precisely, we found that the debate on the whole is characterized by the juxtaposition of rather definite economic expectations with quite complex and differentiated problems and concerns. This reflects the uncertainties still surrounding many of the technical particularities and potential impacts of drones on both societies and the environment.

See the full review at https://www.sciencedirect.com/science/article/pii/S2590198219300879

Flirtey Granted Patent for Automated Parachute Safety System Malek
Murison February 10, 2020

Drone delivery specialist Flirtey has been granted a patent that the company says will "enhance its fundamental technology". The patent refers to an automatic parachute deployment system to support drone flights and aerial deliveries being carried out safely. It recognizes the ability of a drone's technology to detect an error in operation while in flight and deploying a safety

mechanism, if necessary. The technology can be used both for urgent medical deliveries and for more everyday parcel drops. A safety system capable of preventing payload damage and ensuring the safety of people below is vital.

There are currently two notable drone parachute systems on the market, from Parazero and Indemnis. Both deploy automatically when a fault or loss of power is detected.

Flirtey launched a new delivery drone in September 2019, the Flirtey Eagle. Also unveiled was the Flirtey Portal, a takeoff and landing platform that enables scalable store-to-door operations. The company's software platform enables drones to deliver items with one operator overseeing ten delivery drones. Flirtey currently holds over 25 patents, granted and pending, in the United States and worldwide. https://dronelife.com/2020/02/10/flirtey-granted-patent-for-automated-parachute-safety-system/

11Feb20

Wingcopter, Merck complete first drone delivery trial Josh Spires - Feb. 9th 2020

Delivery drone company Wingcopter, in partnership with Merck and Frankfurt University, has completed its first drone delivery trial showcasing the benefits of drones as a delivery method. The delivery test spanned over 25 km from a Merck lab in Gernsheim, Germany, to the Merck headquarters in Darmstadt, Germany.

The trials have already proven beneficial for the companies involved, in some cases lowering delivery times by up to a day. The drones have also allowed costs and environmental damages to be drastically cut down.

The drone delivery trial differed from other deliveries as the drone was beyond the visual line of sight for the duration of the flight, something not normally done. The drone also flew over buildings, powerlines, cars, and even people. The company is hoping that the trials they are conducting can be a standard for future delivery projects.

The next step for the drone delivery trials includes deliveries continuing to be completed by drone, with the findings to be summarized in a report coming out in March. https://dronedj.com/2020/02/09/wingcopter-merck-complete-first-drone-delivery-trial/#more-23950

ADI releases Remote ID NPRM Guide for submitting comments Haye Kesteloo Feb. 10th 2020

The Alliance for Drone Innovation (ADI) released its Remote ID NPRM Guide for submitting comments to the Federal Aviation Administration (FAA). Over the last few weeks, we have seen more guides that aim to help drone pilots make sense of the new proposed regulations from the FAA for remote identification for drones. Many drone enthusiasts are concerned that the current proposed rules are too restrictive, costly, and an invasion of the drone pilot's privacy. Members include first responders, drone racing leagues, model aircraft manufacturers, commercial drone service providers, and software developers.

The Alliance for Drone Innovation supports the FAA's initiative to implement Remote ID for drones, but is concerned about the redundant, overly strict, and costly approach the FAA proposed in the NPRM. As ADI prepares formal comments to submit to the FAA by its March 2, 2020 deadline, we wanted to highlight some of our top concerns, which anyone who is interested in drone innovation may also wish to consider as they prepare their own comments.

Comments should be submitted at the official Regulations.gov website prior to the March 2 deadline: https://www.regulations.gov/comment?D=FAA-2019-1100-0001

ADI encourages everyone in the drone community to take this limited but crucial opportunity to comment thoughtfully on the FAA proposal, focusing on the aspects that impact you specifically. If you share our concerns, use them in your own comments, but we suggest taking the time to draft your own perspective, explaining the proposal's impact on you in your own words.

You can view and download the ADI Remote ID NPRM Guide here. https://dronedj.com/2020/02/10/adi-releases-remote-id-nprm-guide-for-submitting-comments/#more-23945

Drone delivers wine to couple on quarantined coronavirus cruise ship Josh Spires Feb. 9th 2020

An Australian couple stuck on a quarantined cruise ship with cases of coronavirus on board have managed to get wine delivered by drone. The couple's wine club was more than happy to send wine to the cruise ship via drone, leaving the couple a little bit happier.

Posted to [Facebook](#) by Jan and Dave Binskin on February 7, the couple provided insight into life on the quarantined Diamond Princess cruise ship off the coast of Japan, and more specifically, getting wine onto the ship.

The Naked Wine club received the request from the couple who wanted to know if they could get a wine delivery while stuck on the ship. To everyone's surprise, they accepted.

The couple's post stated that two cases of wine were delivered to the ship by drone, and said the [Japanese](#) Coast Guard had no idea what was going on. https://dronedj.com/2020/02/09/drone-delivers-wine-couple-quarantined-coronavirus-cruise-ship/#more-23962

Transformable Multirotor/Fixed-Wing sUAS Under Development 10 Feb 2020 Mike Ball

[Auterion Government Solutions Inc](#) (AGS Inc) and [Quantum-Systems GmbH](#) have announced that the two companies have partnered to develop a new combination multicopter/fixed-wing small unmanned aerial system for the U.S. Government defense and security markets. The new drones will be based around Quantum-Systems' Vector and Scorpion drones and the Auterion OS secure open-source operating system.

The Vector and Scorpion feature modular construction with a configurable base fuselage. Scorpion is a tri-copter that can be utilized in urban environments when a combination of maneuverability and hovering capabilities are required. It is ideal for the gathering of ISR and situational awareness data, and can be fitted with an optional tethering system to enable 24/7 operations.

By adding fixed wings and a tail section to the base fuselage, Scorpion can be transformed into Vector, an energy-efficient, fixed-wing VTOL UAS for longer range, longer endurance missions. https://www.unmannedsystemstechnology.com/2020/02/transformable-multirotor-fixed-wing-suas-under-development/?utm_source=UST+eBrief&utm_campaign=88744c4503-eBrief_2019_11Feb&utm_medium=email&utm_term=0_6fc3c01e8d-88744c4503-111778317

Global remote ID of drones now viable via Iridium satellite services

Multiple press sources report that UK spatial management technology company RelmaTech has announced global identification and tracking of all flying and moving objects is technically and commercially viable via satellite based communications.

RelmaTech has recently been trialing the integration of Iridium's recent-release new format, ultra-compact satellite modem services into its Secure Integrated Airspace Management (SIAM) solution, and the trials have been successful, according to the company. The cloud-based SIAM incorporates compact, light-weight, low power modules deployable into all types of UAS to provide a communications network to support all operational needs for managing large fleets of UAV/UAS over national and continental areas. According to the press reports, all UAS flown in the recent NASA UTM TCL4 program in Reno, Nevada was fitted with a SIAM module that provided continuous real-time UAS remote ID and tracking information over the cellular network and by WiFi direct broadcast. https://www.unmannedairspace.info/latest-news-and-information/global-remote-id-of-drones-now-viable-via-iridium-satellite-services-relmatech/

12Feb20

UAF research team uses drones to help the community AST Drone *John Dougherty* Feb 10, 2020

FAIRBANKS, Alaska. Unmanned aerial systems are quickly becoming an important tool for many industries and agencies in the U.S. On Friday morning, the Alaska State Troopers requested the help of the Alaska Center for Unmanned Aircraft Systems Integration to help them conduct a welfare check.

According to trooper Tim Abbott, they received a call asking them to check in the woods near UAF for an individual who hadn't been seen for a few weeks. Troopers responded to the area on foot while Lee Winningham, chief pilot for ACUASI flew a drone overhead.

ACUASI is one of the country's leaders in unmanned aircraft research. "Our primary objective is to safely integrate unmanned aircraft systems into the national airspace. Translation: get unmanned aircraft in to do missions that right now are risks to human pilots," said Cathy Cahill the director of ACUASI.

While troopers were in the woods searching on foot, Winningham was able to fly ahead of them and direct them over the radio on where they should look.

ACUASI is currently working on getting approval to do more flights beyond the visual line of site as well as potentially delivering medications with a UAS.
https://www.webcenter11.com/content/news/UAF-research-team-uses-drones-to-help-the-community-567748711.html

Chernobyl 3D radiation hotspot map created using LiDAR technology
INTERNATIONAL NEWS UK SAM LEWIS FEBRUARY 12, 2020
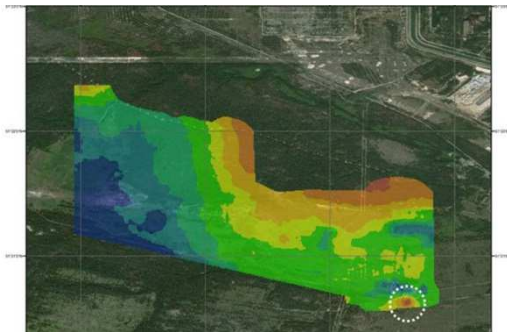
Routescene's LiDAR technology has been utilized by a UK team on its ten-day mission creating a map of radioactive hotspots in Chernobyl.

Led by Professor Tom Scott of Bristol University, the UK's National Centre for Nuclear Robotics used a DJI M600 hexacopter with an attached lightweight LidarPod from Routescene.

Data was collected using Routescene's LidarViewer Pro software, which produced a digital terrain model (DTM), combined with a gamma spectrometer survey. The drone was used in creating a map of the exclusion zone around the Chernobyl Nuclear Power Plant, near the city of Pripyat, Ukraine, which was abandoned nearly 34 years ago. Surveyed sites included Buriakivka, a village abandoned following contamination from the accident, and the Red Forest, woodland adjacent to the reactor.

Results revealed radiation levels had dispersed in some places, others remained highly dangerous, with the worst spots having the ability to dose a person with more radiation in a few hours than they would typically receive in a year.
https://www.commercialdroneprofessional.com/chernobyl-3d-radiation-hotspot-map-created-using-lidar-technology/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-323521-Commercial+Drone+Professional+DNA+-+2020-02-12

Indonesia plans to mass-produce drones by 2022 Josh Spires Feb. 11th 2020

Indonesia is planning to start mass-producing its Black Eagle long-range surveillance and attack drones for military use by 2022. The news comes two years earlier than originally planned by President

Joko Widodo. PT Dirgantara Indonesia, a state-owned company will be tasked with manufacturing the drones.

The Black Eagle drone was co-designed by the Assessment and Application of Technology Agency, Space and the Defence Ministry's research agency, and the National Institute of Aeronautics.

Along with PT Dirgantara Indonesia, PT Len, which is also state-owned, will be producing the electronics in the drones, including the cameras, sensors, and some weapon systems.

The drone is designed to fly at a max altitude of 9,000 meters and a minimum of 3,000 meters, with major use of the drones to secure the country's borders.
https://dronedj.com/2020/02/11/indonesia-mass-produce-drones-2022/

The Commercial Drone Industry: Bubble Burst, or Billion Dollar Industry? Miriam McNabb February 12, 2020
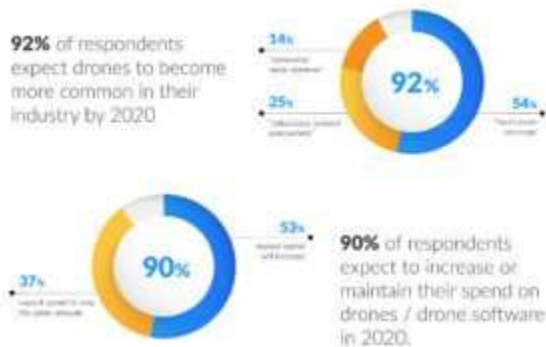
DroneDeploy recently surveyed 145 customers across 10+ industries, including Oil & Gas, Agriculture, Mining, Roofing, Construction, Solar Energy and more, asking how they drones and drones software and how they are benefiting from this technology. (You can download the report for free, here.)

Drones and drone mapping platforms show clear benefits and have established use cases in construction, insurance, agriculture and insurance. One big 10 university, for example, is using drone technology for applications that range from facility maintenance to security. With more than 2000 acres to manage, they're using drones to manage their lawns – and to go further:

The university aims to track year-over-year erosion and tree lean through DroneDeploy. This will bring even more cost savings and campus security, as the university's team will be able to spot and address trees that could potentially fall and damage campus buildings or harm students.

One major hotel chain has found benefit in using drone technology to manage and monitor sites around the globe – allowing executives who sit in a central office to make informed decisions about maintenance, security, and new buildings.

The vast majority of customers said they expect both their use of drones and the use of drones in general to increase. https://dronelife.com/2020/02/12/the-commercial-drone-industry-bubble-burst-or-billion-dollar-industry-what-the-data-says/

Drones with thermal cameras are saving injured koalas Josh Spires Feb. 12th 2020

Victorian forest and wildlife officers have been going into areas affected by the recent bushfires with DJI Mavic 2 Enterprise Dual drones to locate and perform visual checks on koalas that survived the fires.

The drone is sent up into the air once a koala is spotted and captures both visual and thermal images. The images are sent to a ground station where the images are inspected closer to see if anything is visually wrong with the koala.

Once the koala is inspected on the larger display, a cherry picker is sent up to the tree to collect the koala and bring it down from the tree. The injured koalas are sent to a wildlife triage center set up in Bairnsdale, Victoria, as a direct response to the bushfires. The koalas are taken care of in the triage center, and once ready, are released back into the wild.

Drones have been flying over bushfire stricken areas for the last few weeks determining the full extent of the damage and locating other surviving animals. Drones are also being looked at as an option to plant trees and help prevent future fires, by analyzing data from various sensors. https://dronedj.com/2020/02/12/drones-thermal-cameras-saving-injured-koalas/

13Feb20

Blue Canyon Technologies to supply bus for Made In Space's Archinaut One Debra Werner February 12, 2020

SAN FRANCISCO –Blue Canyon Technologies (BCT) announced plans Feb. 12 to supply its X-SAT small satellite for Made In Space's Archinaut One on-orbit manufacturing demonstration mission.

"The implications of our ability to conduct 3D printing in space are endless, and we're proud to partner with Made In Space to make this mission a reality," George Stafford, BCT founder and CEO, said in a statement. For the Archinaut One mission, BCT will assemble and functionally test X-SAT, its largest satellite bus, prior to delivering it to Made In Space. Made In Space will perform payload integration and space vehicle testing.

UAS and SmallSat Weekly News

BCT also is supplying X-SAT to MethaneSAT, a subsidiary of the nonprofit Environmental Defense Fund, for an environmental monitoring satellite scheduled to launch in 2022. BCT advertises X-SAT on its website as a 250-kilogram class satellite with a deployable solar array that provides 400 watts of peak power.

NASA awarded Made In Space a $73.7 million contract to additively manufacture a pair of ten-meter beams onboard the Archinaut One satellite scheduled to launch no earlier than 2022. https://spacenews.com/bct-archinaut-one/

Japan Airlines & Sumitomo Partner with Bell Textron to Provide Air Mobility Services in Asia Harry McNabb February 13, 2020

Japan Airline (JAL) and Sumitomo Corporation have entered into an agreement with Bell Textron to promote and develop products and services for the Air Mobility Industry, including the infrastructure that supports the next generation air transportation.

With this agreement, JAL, Sumitomo and Bell will explore business opportunities for the air mobility services: deploying Bell's eVTOL in Japan and Asia. Bell's Vice President of Innovation, Scott Drennan, told DRONELIFE: "We are excited to take this substantial step to bring together an international airline, a major infrastructure provider, and a VTOL OEM to work collaboratively on a more connected mobility future."

Pictured is a Bell Textron prototype, a relatively small aircraft that can take off and land vertically by rotating multiple rotors with an electric motor. This vehicle and other similar prototypes are attracting attention as a means of next-generation urban transportation that combines drone and electric vehicle technologies.

https://dronelife.com/2020/02/13/japan-airlines-sumitomo-partner-with-bell-textron-to-provide-air-mobility-services-in-asia-draft/

HUSH AEROSPACE LLC

Today I visited the company in Virginia Beach and met with Zachary Johns, CEO. They provide custom aircraft tailored to the unique needs of each customer. The process starts with a questionnaire to learn how many vehicles are needed and their intended use followed by vehicle, payload and

flight time requirements. They then build a vehicle mockup including airframe, propulsion system and payload compartment that matches the missions. The process moves from concept development and system integration to vehicle design, production and flight testing with operations and management protocols. Fabrication facilities are available in-house.

Customers include federal agencies, software developers, and companies in civil engineering, electric power and oil and gas, both US and foreign. Since customer requirements are unique, so are the solutions that match their needs. Products include multiple platforms, both winged and multi-rotor designs.   Repeat customers are 100%.

I was treated to a flight demonstration of a winged multi-rotor vehicle that packs and un-packs in five minutes in a package that fits in most vehicles. The noise level was surprisingly low. Perhaps that's why they call it Hush. See their website at hush.aero. - Bob

Drone Dancing Competition opens for registration APPLICATION EDUCATION
INTERNATIONAL NEWS SAM LEWIS FEBRUARY 13, 2020

Companies Drobots and DroneBlocks have announced that registration for their Spring 2020 Synchronized Drone Dancing Competition is now open.

The event claims to be the only one to combine digital and visual arts with aerial robotics, while judges are selected from within the UAV industry. The competition is open to teams of children aged 10-14, while final submissions are made online as a video. Therefore, teams are not limited by location. So in-demand is the program that this year's competition is capped at 100 teams, who will pay only $20 for the experience.

DroneBlocks' Marisa Vickery states: "The Drone Dancing Competition encourages students skilled in the arts to collaborate with those interested in technology, allowing students to explore both the logical and creative sides of their brain. "This is an incredible integration of choreography, art, music and technology; the purest example of what STEAM education truly is!" https://www.commercialdroneprofessional.com/drone-dancing-competition-opens-for-registration/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-323612-Commercial+Drone+Professional+DNA+-+2020-02-13

14Feb20

DJI pledges $1.5M and uses DJI Argas drones to fight Coronavirus in China Haye Kesteloo Feb. 12th 2020

Since the COVID-19 coronavirus emerged in Wuhan, China in December of last year, it has spread around the world quickly. As of today, DJI reports that the death toll within mainland China exceeded 1,113, with 44,563 confirmed cases.

The Chinese drone manufacturer pledged $1.5M in aid to help stop the virus from spreading. DJI also adapted the Agras series of agricultural spraying drones to spray disinfectant in potentially affected areas. Drones can disinfect larger areas far more quickly than when done by traditional means, and fewer workers are potentially exposed to the virus.

After rounds of research and testing, teams developed best practices for spraying a chlorine or ethyl alcohol-based disinfectant from the air. The concentration of the solution as well as flight guidelines can be modified for different circumstances, such as whether an area is known to be infected or not.

DJI has sprayed disinfectant in over 3 million square meters in Shenzhen. The company is also helping 1,000 counties in China to adopt the spraying method. Target areas include factories, residential areas, hospitals, and waste treatment plants. In total, this covers 600 million square meters across the country so far. With this solution, spraying efficiency can be 50 times faster than traditional methods. https://dronedj.com/2020/02/12/dji-pledges-15m-and-uses-dji-argas-drones-to-fight-coronavirus-in-china/

First drone use report released by Santa Cruz County Sheriff's Office Haye Kesteloo Feb. 13th 2020

The annual drone use report is part of the Sheriff's Office transparency policy that explains the agreement between the police and the community on how the unmanned aerial systems are allowed to be used.

In 2019, the Santa Cruz County Sheriff's Office launched their DJI Mavic Airs 21 times to fight crime and respond to emergency situations. The drones have been used by the 14-member team during suspect searches, documenting crime scenes, high-risk incidents, and search and rescue missions.

Santa Cruz County uses about a dozen [DJI Mavic Airs](link) and has handed them out to its Deputies, some of whom even carry them in their police vehicles so that the drones can be deployed at a moment's notice. However, there are some restrictions as to how and when these unmanned aircraft can be used.

 Working with the community and the city, Santa Cruz Police Chief Andy Mills is working on drawing up a policy for the use of drones and other technology by his department. It is not easy to find the right balance between transparency for predictive analytics, facial recognition, and technology *"The mayor asked us to take it back and work with the ACLU and other folks, other community members to determine what that should look like … and so we're suggesting a policy as well as sending it back to public safety committee to take a look at the edits we had made,"* said Mills.

The Santa Cruz City proposal is scheduled to return to the Public Safety Council, February 27 for their recommendations. In Santa Cruz County, the Sheriff's Office was the first law enforcement agency to catch criminals during public safety emergencies. https://dronedj.com/2020/02/13/first-drone-use-report-released-by-santa-cruz-county-sheriffs-office/

AeroVironment Receives $8.5 Million Foreign Military Sales Contract Award for U.S. Central Command Ally February 12, 2020 Military News
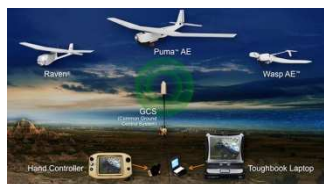
 The contract was awarded on December 17, 2019 to provide Puma™ 3 AE unmanned aircraft systems, training and support to an allied

It is a man-portable unmanned aircraft system designed for land and maritime operations. The hand-launched Puma 3 AE has a wingspan of 9.2 feet, weighs 15 pounds and operates for up to 2.5 hours at line-of-sight range of 20 kilometers with a standard antenna, and up to 60 kilometers with a Long-Range Tracking Antenna. Capable of landing in water or on land, the all-environment Puma, with its Mantis i45 sensor suite, empowers the operator with extended flight time and a level of imaging capability never before available in the small UAS class. https://uasweekly.com/2020/02/12/aerovironment-receives-8-5-million-puma-3-ae-foreign-military-sales-contract-award-for-u-s-central-command-ally/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_02_13_2020&utm_term=2020-02-14

SkyGrid Adds Hyper-Local Weather Data for Safer Drone Operations February 13, 2020 News

SkyGrid, a Boeing, SparkCognition company, today announced it's integrating multiple data layers, including hyper-local weather data, into its aerial operating system to enable safer drone operations.

In addition to weather data, the system has global airspace intelligence, such as aircraft traffic, airspace classes, flight restrictions, obstacle data and population density. Data include:

- Global weather updates: Wind speed, precipitation type and intensity, temperature, visibility, dew point, cloud cover, air quality, pressure.
- Hyper-local weather: Minute-by-minute hyper-local weather data, including precipitation, wind, lightning, and air quality.
- Weather forecasts: Global weather forecasts, including precipitation, lightning, flooding, fire index.
- Live flight data: Global flight information in near real-time, including aircraft positions, planned routes, status information.
- Advanced NOTAMs: Global flight restrictions and navigation warnings.
- Live roadway traffic: Near real-time traffic to provide ground awareness during flight.

https://uasweekly.com/2020/02/13/skygrid-adds-hyper-local-weather-data-for-safer-drone-operations/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_02_13_2020&utm_term=2020-02-13

Page 20