UAS and SmallSat Weekly News

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Skyports and Volocopter Announce First Air Taxi Volo-Port Will Be Built by the End of 2019 Miriam McNabb May 31, 2019

Urban air mobility is more than just a cool idea. At drone conferences around the world, UAM is a hot topic as both regulators and communities seek a way to address an increasingly significant urban problem: traffic. For many cities around the world, adding transportation infrastructure on the ground is simply not an option – highways don't have room for another lane. There is, literally, nowhere to go but up.

Enter the concept of a multimodal urban transportation infrastructure that includes air taxis. "Multimodal transportation infrastructure" is the concept of using multiple transportation methods for any trip – for example, many commuters now take a combination of longer range rail transportation and shorter range bus or subway: UAM imagines a short drone taxi ride as part of the trip which might cut traffic, pollution, and travel time.

Many such solutions have been envisioned. Uber has presented its version: there is a drone taxi service currently operating – albeit on a very limited demonstration basis, rather than as an integral part of the urban transportation system – in Dubai. But UK-based "vertiport" company Skyports, partnered with air taxi producers Volocopter, have announced that they will be first with a completed air taxi Volt-Port – a landing pad for an electric vertical take off and landing air vehicle. https://dronelife.com/2019/05/31/what-exactly-is-a-volo-port-skyports-and-volocopter-announce-first-air-taxi-port-will-be-built-by-the-end-of-2019/

Is it a Fixed Wing or a VTOL Drone? The BIRDIE is the Best of Both Miriam McNabb May 31, 2019

Depending upon the terrain and conditions, there are times when a fixed-wing drone is the best tool for the job – and times when a vertical take-off and landing drone is the only way to navigate the terrain. Polish drone manufacturer FlyTech UAV has addressed that problem for their customers – introducing detachable extension modules that convert their fixed-wing BIRDIE into a VTOL

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system. They can be attached or detached at any time, giving the user total flexibility to use the best tool according to the environment they're working in.

The aim was to extend BIRDIE's capabilities and make it fit any terrain and environment – so that it would be able to take off and land in urbanized areas or forests, where it is not possible to use the fixed-wing. The company plans to launch the BIRDIE in the U.S. through reseller and partner channels. https://dronelife.com/2019/05/31/is-it-a-fixed-wing-or-a-vtol-drone-the-birdie-is-the-best-of-both/

Property Casualty Insurance Company Leverages Kespry Drone Solution Betsy Lillian May 29, 2019

Grinnell Mutual, a property casualty insurance company based in Grinnell, Iowa, has adopted Kespry's drone platform for residential and commercial roof inspections.

The company now routinely uses it to take high-resolution photos that are blended into single, 3D images of roofs. The images, combined with AI and machine learning, help adjusters determine storm-related damage to make accurate claims.

"We can knock out an average inspection within about 15 minutes," remarks Chuck Tremain, property specialist at Grinnell Mutual. "Without a drone, a roof inspection can take up to two hours. With the drone, I have the data right there. I can look at it on-site and make decisions on the spot. Our policyholders and contractors have trusted the data and found that it is accurate." Roof inspections often require climbing ladders and walking across unstable surfaces, but drone inspections mitigate this risk. https://unmanned-aerial.com/property-casualty-insurance-company-leverages-kespry-drone-solution?utm_medium=email&utm_source=LNH+05-30-2019&utm_campaign=UAO+Latest+News+Headlines

Topcon Announces Next Generation Flight Planning Software News May 30, 2019

Topcon Positioning Group announces the next generation flight planning system for its rotary-wing aerial UAV offering — Intel® Mission Control Software. The new software is designed to facilitate automated flight planning, managing missions and

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data handling for the Intel® Falcon™ 8+ Drone – Topcon®Edition and its available payload options.

The software allows operators to set project parameters and prepare missions using presets for 2D areas like polygon, corridor and city grid as well as 3D structures like towers, buildings and facades.

"It features the ability to import elevation, KML, GeoTIFF and Shapefiles for real life visualizations targeted for accurate planning. Plus, expanded preset options support automated flight including circle of interest, panorama, and 2D and 3D missions with automatic elevation and terrain adoption," said Charles Rihner, vice president of planning for Topcon Emerging Business.

Additionally, the software includes automatic pre-flight safety and system checks while in mission planning. Operators will receive detailed communication such as estimated battery life, airspace integration, ground and object safety limits, maximum dive and climb rate, minimum and maximum altitude, camera speed, number of images, camera storage, GSD check, and target photo coverage and quality. https://uasweekly.com/2019/05/30/topcon-announces-next-generation-flight-planning-software/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_05_31_2019&utm_term=2019-05-31

Drone captures dramatic tornado footage in Canton, TX Haye Kesteloo May. 30th 2019

As large parts of the country are being hit by tornadoes, the Weather Channel tweeted out this video of a tornado in the area of Canton, TX. While it is not the first time, that a tornado like this is recorded with a drone, the aerial vantage point provides us with a new perspective.

Please keep in mind though that when you're flying a drone to capture events like these, please do NOT get in the way of rescue workers as Sgt. Richard Meulenberg explains in this video. Also, be sure to stay safe yourself when you're this close to nature's wrath. https://dronedj.com/2019/05/30/tulsa-police-department-video-facebook/

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Percepto to operate live overseas autonomous drone missions from London APPLICATION BUSINESS INTERNATIONAL NEWS ALEX DOUGLAS MAY 30, 2019

The company will also launch the next generation of its drone-in-a-box system, including software improvements and its all-weather base station.

This will become the first time that Percepto, which last week announced a Round A completion, has brought its autonomous drone solution to the security event. The company will give security practitioners the opportunity to discover how the technology can be used to improve security and safety, reduce risk and optimize operations.

Co-founder and chief commercial officer, Ariel Avitan, commented: "We will demonstrate how Percepto delivers aerial surveillance through patrols, real-time detection and tracking of humans and vehicles, as well as anomaly detection, all without the need for an on-site operator or pilot." https://www.commercialdroneprofessional.com/percepto-to-operate-live-overseas-autonomous-drone-missions-from-london%EF%BB%BF/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-303382-Commercial+Drone+Professional+DNA+-+2019-06-01

XAG and Bayer host talks to deepen partnership for digital farming APPLICATION BUSINESS HEADLINE NEWS UK ALEX DOUGLAS MAY 30, 2019

The companies are set to explore advanced chemical application via autonomous drones in Japan.

XAG's CEO Peng Bin and co-founder Justin Gong attended a series of intensive meetings with delegates from Bayer to orchestrate a blueprint for mutual business development. The companies said they were looking to focus on developing new technologies and new business patterns to achieve sustainable agriculture development in Japan.

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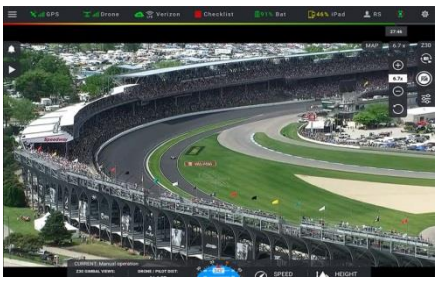
While conducting research on UAS-specialized pesticides and spraying prescriptions for plant protection, XAG and Bayer will also leverage their own strengths to build a digital agriculture platform. https://www.commercialdroneprofessional.com/xag-and-bayer-host-talks-to-deepen-partnership-for-digital-farming%EF%BB%BF/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-303382-Commercial+Drone+Professional+DNA+-+2019-06-01

Multiple agencies deploy DroneSense Platform as part of safety measures at Indy 500 APPLICATION EMERGENCY SERVICES NEWS UNITED STATES ALEX DOUGLAS MAY 28, 2019



IN Police Department, the Indianapolis Metro Police Department, Indianapolis Fire and Wayne Township Fire Department deployed drones, both large and small, to help protect crowds at the various events throughout race weekend.

Commenting on the use of drones, Ron Shelnutt, police officer with the Indianapolis Metro Police Department, said: “With the Indy 500 being one of the largest events for attendance in the world, providing overwatch operations is very challenging. The DroneSense platform is seamless, easy to use and was essential in providing real time video streams from our drones to the command center.”

Drones were flown using the DroneSense software platform, which allowed first responders the ability to live-stream footage into the various command centres, providing officers and security officials with actionable, real-time video for security operations.
https://www.commercialdroneprofessional.com/multiple-agencies-deploy-dronesense-platform-as-part-of-safety-measures-at-indy500/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-303382-Commercial+Drone+Professional+DNA+-+2019-06-01

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CU researchers return from studying tornadic thunderstorms with drones MAY 30, 2019 MICHAEL KONOPASEK

BOULDER, Colo. – University of Colorado engineers are back in Colorado after chasing tornado-spawning storms on America’s Great Plains. It’s been an eventful two weeks for the crews using drones to collect data by flying on the edge of supercell thunderstorms.

“There’s no question that we’ve taken new, novel data that’s never

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been collected before," said CU engineering professor Eric Frew. Frew, his colleagues and students chased storms in places like Nebraska and Oklahoma. They are in Boulder for a few days to repair drones before heading back into the field.

"Two weeks is a lot longer than we thought things would go … kind of continuously with the weather," Frew said. The team of 15 flew two to three drones on 12 different storms, six of which produced twisters. "We've been successful every single time we've tried to fly on a storm," Frew said. https://kdvr.com/2019/05/30/cu-researchers-return-from-studying-tornadic-thunderstorms-with-drones/

API Unveils Drone Usage Guide Matthew V. Veazey Rigzone Staff May 31, 2019

Seeking to promote worker and operational safety as the industry's list of UAS applications grows, the American Petroleum Institute recently published a new guide to help oil and gas companies establish a framework for using the technology.

API created the guide as new systems, applications, sensors and techniques enable more oil and gas industry-tailored UAS deployments.

API's ***free 32-page Guide for Developing a UAS Program in the Oil and Natural Gas Industry*** covers the following topics:

- Defining use cases
- Assessing UAS capabilities
- Drone program elements
- Data and security considerations
- Flying drones in controlled and uncontrolled airspace

"This guide ensures owners, operators and service providers that are considering entering the industry to introduce UAS into operations in a thoughtful way," concluded Lemieux.
https://www.rigzone.com/news/api_unveils_drone_usage_guide-31-may-2019-158957-article?rss=true

Game of drones: High-flying McGill, ETS students rule the air RENÉ BRUEMMER, MONTREAL GAZETTE June 1, 2019

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The Student Unmanned Aerial System Competition pits the best in Canada's university aeronautical design clubs against one another to see who has the greatest chops in drone design, strategy and control.

This year's event was held in early May at the Centre d'Excellence sur les Drones airfield in Alma in Quebec's Saguenay region. Fourteen faced off at the competition organized by Unmanned Systems Canada to vie for bragging rights and potential careers.

The event draws industry executives, sponsors and government officials looking for potential hires and to see what the brightest young minds are doing to advance technologies or develop new uses. Police forces go to see how theoretical applications can be put to real use. Businesses and governments come to see innovations that could be used to inspect large construction sites or pinpoint where forest fires are located.

Montreal soared at this year's competition, with perennial powerhouse École de technologie supérieure taking first place, with a $7,000 prize. McGill finished second with $5,000. https://montrealgazette.com/news/local-news/game-of-drones-high-flying-mcgill-ets-students-rule-the-air

SpaceX valuation rises to $33.3 billion as investors look to satellite opportunity

MAY 31 2019 Michael Sheetz@THESHEETZTWEETZ

In an amendment of its April fundraising effort, a filing last week from SpaceX showed the company's latest round brought in $536 million at a price of $204 a share. SpaceX has raised just over $1 billion this year, as the company accelerates fundraising to develop its plan to beam high-speed internet to anywhere on Earth.

The space company has undertaken two ambitious and capital intensive projects: Building a network of nearly 12,000 internet satellites, called Starlink and the development of a rocket big enough to send 100 people to Mars. Musk told reporters this month that SpaceX has "sufficient capital" to get its Starlink satellite network "to an operational level." Musk estimates Starlink could generate at least 10 times the revenue that the company's business of launching rockets could. While SpaceX's annual launch revenue is estimated at about $2 billion, Musk sees that topping out at $3 billion in the coming years. But Starlink he said could bring in revenue of "more like $30 billion a year." https://www.cnbc.com/2019/05/31/spacex-valuation-33point3-billion-after-starlink-satellites-fundraising.html

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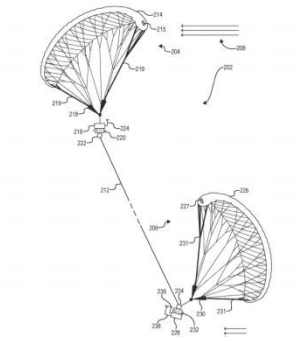
Facebook wants to patent a drone system featuring two kites Brittany A. Roston May 30, 2019

Facebook has filed a patent application that details a drone involving two kites to maintain a specific altitude while also generating electricity that enables longer duration flights.



Batteries are heavy, and small drones are notorious for their short run times. Facebook's patented drone idea would potentially get around both issues by using the kites with a system to generate electricity, helping recharge the battery while in operation for long-distance travel without the need for multiple heavy batteries.

According to the patent application, each drone could be operated independently, though they would also work together during flights to maintain the correct direction and altitude. It's unclear how the system would deal with potential issues such as a wind gust possibly causing one kite to become wrapped around the other. Drones that utilize large kites would likely take up more airspace than a quad-copter and may prove vulnerable to external objects, such as birds. As with any patent, it's possible Facebook will never develop or utilize the dual-kite design. https://www.slashgear.com/facebook-wants-to-patent-a-drone-system-featuring-two-kites-30578662/

IBM is Giving Away 1,500 DJI Tello Drones to Help Developers Code Something Amazing Miriam McNabb June 03, 2019

Drones have proven to be critical tools in disaster response in applications that include pre-disaster base line assessments, situational assessment for commanders, search and rescue, and insurance evaluations post-disaster. To help developers work on new ideas, IBM has published tutorials explaining how to use IBM Watson Visual Recognition and IBM Cloud to analyze drone aerial imagery in post-disaster situations: https://ibm.co/2QfFScZ& https://ibm.co/2HxeggJ. Here is how the giveaway works:

- **Step 1:** Visit the contest page, click "Enter now," and sign up for your free IBM Cloud to be in the running.
- **Step 2:** On Tuesdays between now and June 16, 2019, watch the IBM Developer Twitch channel and check your email. Each week, we'll randomly select a group of winners who

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will receive a DJI Tello drone, full access to code patterns for drone programming and a nice surprise or two.

- **Step 3:** Code something amazing with open source patterns. Complete a series of challenges, using tools like Node-RED and IBM Watson Visual Recognition, Watson IoT, IBM Cloud, and IBM Data and Analytics, to create a drone application that makes a difference in your community. Showcase your work on social using #IBMDroneDrop.

The 2018 winner, self-taught developer Pedro Cruz, is now an IBM employee. For his winning idea, he created a visual vocabulary that could be displayed by disaster victims and read by drones using visual recognition technology. Reading the symbols, the drones would then relay vital information back to relief workers, potentially shortening the response time from days to hours. Check out this article for more information on the contest.
https://dronelife.com/2019/06/03/2019-drone-drop-over-the-next-2-weeks-ibm-is-giving-away-1500-dji-tello-drones-to-help-developers-code-something-amazing/

"I am 100% confident there is going to be a major revolution with VTOLs in this city" June 3, 2019 Philip Butterworth-Hayes Urban air mobility *Michael Doran*

In the race to get the world's first passenger-vehicle urban air mobility service into operation Uber Air is one of the leading pioneers and will announce its first international launch city in Washington DC on June 11. The contenders are Melbourne, Mumbai, Paris, Sydney and Tokyo, with the winner joining Los Angeles and Dallas. Having somewhere to land, re-charge and take-off is an integral piece of the UAM puzzle so Melbourne entrepreneur and planning expert, Clem Newton-Brown launched Skyportz, to work with developers, government and ride-sharing operators to establish a UAM network in Melbourne. He is part of the Uber bid-team and will be in Washington for the big announcement.

I'm a planning consultant, and one of my clients is Microflite Helicopters, who operate the only helipad in the center of the city. I saw a business opportunity in providing the infrastructure for multiple locations. So I'm talking with property clients who are building a tower about spending a little bit more money to put some UAM infrastructure on the rooftop.

It's not going to happen without government support and the strong indication from the Victorian government is that they are keen on it. They've been very proactive in wooing Uber, meeting with key Uber people to understand their requirements and the government is seriously gunning to try and get Melbourne as the first international test city.

https://www.unmannedairspace.info/latest-news-and-information/i-am-100-confident-there-is-going-to-be-a-major-revolution-with-vtols-in-this-city-clem-newton-brown-of-melbournes-skyportz/

4Jun19

Insitu sells 34 ScanEagle drones to Southeast Asian countries 03 JUNE, 2019

FLIGHTGLOBAL.COM GARRETT REIM LOS ANGELES

Insitu was awarded a $47.9 million contract to deliver 34 ScanEagle unmanned air vehicles to Malaysia, Indonesia, the Philippines and Vietnam.

The tactical UAVs are expected to all be delivered by March 2022. In addition to the aircraft, the orders provide for spare payloads, spare and repair parts, support equipment, tools, training, technical services and labor of field service representatives. The UAV is launched using a catapult and recovered using a skyhook, both of which can be mounted on small patrol boats. It has 24h flight endurance and a maximum speed of 80kt.

It is a popular tactical UAV for maritime surveillance. The Malaysian navy has said it plans to use its ScanEagles to patrol the South China Sea portion of East Malaysia and the Sulu Sea. Moreover, Malaysia, Indonesia, the Philippines, and Vietnam each have coastlines on the South China Sea, a body of water that is hotly contested with China.
https://www.flightglobal.com/news/articles/insitu-sells-34-scaneagle-drones-to-southeast-asian-458668/

Silent Falcon UAS Technologies Announces Introduction of the Extended Endurance UAS May 30, 2019 News

Silent Falcon UAS Technologies is pleased to announce the introduction of the Extended Endurance model. It can stay aloft for up to 8 hours in day time, and 4 hours at night.

Communications capabilities have also been upgraded by including three MIMO MANET radios at the Ground Control Station with the SF TriAntenna configuration. This configuration significantly increases connectivity, bandwidth and reliability. It also allows one of the radios to be used to be used to connect a remote site, such as a command center to the radio network.
https://uasweekly.com/2019/05/30/silent-falcon-uas-technologies-announces-introduction-of-the-silent-falcon-ee-extended-endurance-

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uas/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_06_03_2019&utm_term=2019-06-03

FAA Pledges $6 Million in Matching Funds for Drone Integration Testing Partnerships Miriam McNabb June 04, 2019

At the FAA UAS Symposium in Baltimore, Acting FAA Administrator Dan Elwell announced that the FAA would offer new partnerships with the commercial drone industry to help move the integration of drones into the national airspace forward.

The Broad Agency Announcement (BAA) states that applicants must match the federal funds. A company must demonstrate an existing contractual relationship or show that FAA funding would enable it to enter into a contract with a test site. Companies must have the technical capability to work on these technologies:

- Develop and enforce geographic and altitude limitations
- Provide for alerts by the manufacturer of an unmanned aircraft system regarding any hazards or limitations on flight
- Sense and avoid capabilities
- Beyond-visual-line-of-sight operations
- Night time operations
- Operations over people
- Operation of multiple small unmanned aircraft systems
- Unmanned aircraft systems traffic management
- Other critical research priorities
- Improve privacy protections

The application process has two steps. Step 1 is a white paper which is due by June 28, 2019. If that package is accepted, a full proposal must be submitted by July 31, 2019. The FAA expects to award contracts by September 30, 2019. https://dronelife.com/2019/06/04/faa-pledges-6-million-in-matching-funds-for-drone-integration-testing-partnerships/

Stratolaunch, Builder of World's Largest Airplane for Rocket Launches, May Be Closing Mike Wall a day ago Spaceflight Billionaire Paul Allen founded the company in 2011.

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Stratolaunch's rocket carrier plane, the largest aircraft ever built, takes off from the Mojave Air and Space Port in Mojave, California during its first test flight on April 13, 2019.

The world's largest airplane may be grounded after just one flight.

Stratolaunch Systems Corp., which built a huge rocket-toting aircraft named Roc to launch satellites (and eventually people) into space, will soon shut down, Reuters reported on Friday (May 31), citing four anonymous sources. However, Stratolaunch officials have told Space.com the company "remains operational" as of now.

Microsoft co-founder and longtime space enthusiast Paul Allen established Stratolaunch in 2011. But the billionaire died last October at the age of 65, and his sister Jody — chair of Stratolaunch parent venture Vulcan Inc. and trustee of the Paul G. Allen Trust — decided to "set an exit strategy" late last year, according to Reuters. "Jody Allen decided to let the carrier aircraft fly to honor her brother's wishes and also to prove the vehicle and concept worked.

That flight took place April 13 from California's Mojave Air and Space Port. During the 2.5-hour test jaunt, Roc reached a peak altitude of 17,000 feet and a top speed of 189 mph.
https://www.space.com/stratolaunch-largest-airplane-shut-down-report.html?utm_source=sdc-newsletter&utm_medium=email&utm_campaign=20190604-sdc

Alliance for Drone Innovation launches new initiatives in first anniversary celebrations APPLICATION BUSINESS NEWS UNITED STATES ALEX DOUGLAS JUNE 4, 2019

Its aim is to support the voices of the country's small businesses and independent commercial drone operators whose livelihoods are affected by federal, state and local drone policies. ADI confirmed it is has added PrecisionHawk as the 18th member of the organization. One of the new initiatives, the Drone Operators Federation, will be led by PrecisionHawk and will aim to guide ADI's advocacy efforts on behalf of commercial drone operators to advocate for favorable policies that protect and grow small and medium-sized businesses.

Commenting on the new initiatives following a successful first year, Jenny Rosenberg, executive director, said: "ADI's inaugural year was marked by incredible advancement in our industry for

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personal and commercial drone users, as well as several incidents that reinforced our number one priority – safety. Looking forward, the potential for drone use in our society will be transformational as reflected by our growing membership of innovators and leaders in drone technology. Our new initiative to amplify the voices of the innovators and operators in the United States will build upon ADI's prior success at advocating for public policies that maximize innovation." https://www.commercialdroneprofessional.com/alliance-for-drone-innovation-launches-new-initiatives-in-first-anniversary-celebrations/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-303598-Commercial+Drone+Professional+DNA+-+2019-06-04

DJI declares its drones meet Transport Canada requirements for flight near people

APPLICATION BUSINESS NEWS ALEX DOUGLAS JUNE 4, 2019

The declaration, along with DJI's previously declared compliance with new requirements for drone flight in controlled airspace, allows DJI customers to use their drones across Canada.

Commenting on the confirmation, Javier Caina, DJI director of technical standard: "We have put months of effort into documenting our safety expectations, testing standards, reliability guidelines and other processes to comply with Transport Canada's new requirements. Thanks to this effort, we are able to confirm that our customers can continue flying DJI drones in controlled airspace and near people when the new rules take effect." https://www.commercialdroneprofessional.com/dji-declares-its-drones-meet-transport-canada-requirements-for-flight-near-people%EF%BB%BF/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-303598-Commercial+Drone+Professional+DNA+-+2019-06-04

5Jun19

Amazon unveils drone it says will be delivering packages within months

Stephanie Condon for Between the Lines June 5, 2019 Topic: Artificial Intelligence

Amazon on Wednesday announced a new commercial delivery drone that it says will be delivering packages to customers in months. The new drone marks a huge milestone for Amazon's Prime Air program, which has since its inception developed more than two dozen drone designs.

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The new machine, unveiled on stage at the re:Mars conference, is fully electric. It can fly up to 15 miles and deliver packages under five pounds to customers in less than 30 minutes. While limiting its use to packages that are five pounds or less may not sound impressive, that represents 75 percent to 90 percent of packages that Amazon delivers today, according to Jeff Wilke, CEO of Amazon's Worldwide Consumer division. https://www.zdnet.com/article/amazon-unveils-drone-that-will-be-delivering-packages-in-months/?ftag=TRE-03-10aaa6i

Honeywell Develops Compact FBW for UAM Market Mark Huber June 4, 2019

Honeywell has developed a compact fly-by-wire flight control system for urban air mobility systems that is approximately the size of a paperback book, the company announced Monday. The system drives electric actuators and dynamically adjusts flight surfaces and motors, thereby eliminating the need for heavy hydraulics, control cables, or pushrods.

Its flight control computer has features derived from Honeywell's fly-by-wire systems for airplanes and includes triplex architecture and lockstep processing, a two-channel system where one channel constantly checks the other's work. Honeywell plans to demonstrate the new system June 11 to 12 at the Uber Elevate Summit in Washington, D.C.

Honeywell has agreements to develop navigation and automatic landing systems with several UAM vehicle companies, including Volocopter, Pipistrel, and Eviation. https://www.ainonline.com/aviation-news/general-aviation/2019-06-04/honeywell-develops-compact-fbw-uam-market

FAA Issues Waiver for Drones With Parachutes to Fly Over People – and Indicates a Way Forward for New Drone Technologies Miriam McNabb June 05, 2019

In a significant move towards making flight over people more available to companies with commercial drone applications, the FAA has announced that they have issued the Hensel Phelps Construction Company of Greeley, Colorado, a Part 107 waiver to operate a DJI Phantom 4 drone equipped with a parachute over people. The waiver opens the door for other companies to receive a similar waiver – and indicates a way forward for integrating new drone technologies.

The parachute in question is a ParaZero SafeAir system – and the waiver proves Israeli-based ParaZero's investment in working with government on ASTM standards was worthwhile. "The FAA did not certify or approve the parachute that will be used; however, the FAA determined

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that the waiver application sufficiently met the standard design specification (ASTM 3322-18)and that the proposed small Unmanned Aircraft System (sUAS) operation could be safely conducted under the terms and conditions of a waiver," says the FAA press release. https://dronelife.com/2019/06/05/faa-issues-waiver-for-drones-with-parachutes-to-fly-over-people-and-indicates-a-way-forward-for-new-drone-technologies/

Skyward Seminar

Whether your company is already using drones or you're just starting out, it can be hard to keep up with technological advancements and regulatory changes. Join Skyward on Friday, June 14 at 2PM ET as we discuss how we helped our colleagues at Verizon Media Group start, maintain, and scale an enterprise drone program. Key takeaways include:

- Creating a culture of safety and transparency
- How to ensure efficient, standardized flights
- The right way to start small and scale smart
- How to plan for new tech and regulatory changes

Date: Friday, June 14 **Time:** 11am PT / 2pm ET **Register:**
https://mail.google.com/mail/u/0/#inbox/WhctKJVRLGfrxhkFxDhSjBSfgvVvQWmgnwBlGjvcVpKDdSBnnQLmrRHbJHQwCpRVQchbJcg

Alliance for Drone Innovation celebrates one-year anniversary! Haye Kesteloo Jun 4 2019

During the FAA UAS Symposium in Baltimore, the Alliance for Drone Innovation (ADI) — a Washington, DC-based coalition of manufacturers, suppliers, and software developers of personal and professional drones — celebrates its one-year anniversary and added PrecisionHawk as its 18th member. It also launched the Drone Operators Federation to advocate for small businesses and an advocacy partnership with the Network of Drone Enthusiasts (NODE).

ADI is also launching a partnership with the Network of Drone Enthusiasts (NODE), a

community of over 30,000 drone users from across the country. Founded in 2017, NODE is a grassroots movement of drone users, enthusiasts, educators and artists nationwide dedicated to ensuring fair and responsible drone regulations at the federal, state and local levels. NODE's membership focuses on spreading responsible and safe flying practices while providing a voice for those participating in the advancement of new drone technology that can benefit millions worldwide. https://dronedj.com/2019/06/04/alliance-for-drone-innovation-anniversary/#more-16793

USGS, Scientists Test Drone-Based Stream Gauging at '2019 Aquatic Airshow'

June 4, 2019 Mapping and Surveying

U.S. Geological Survey and independent scientists gathered this month in Auburn, Maine, to evaluate the use of sensor-mounted unmanned aircraft systems to gauge stream stage, velocity, bathymetry and discharge. The technology is being evaluated and modeled to determine whether it will support measurement of rivers, especially when they are flooded or contain floating trees, ice or other debris.

Two dozen hydrologic, geospatial and scientific experts gathered in the "2019 Aquatic Airshow" to assess this technology. The USGS Water Mission Area works with partners to monitor, assess, research and report on a wide range of water resources and conditions, including streamflow, groundwater, water quality, water use and water availability.

The testing involved equipping drones with noncontact sensors, including ground-penetrating radar for measuring river depths, doppler velocity radar and cameras with velocimetric analysis for measuring water surface velocities and calculating mean-channel velocities and high-resolution cameras for photogrammetric mapping of surface topography and vegetation. Team members from the USGS collected ground-truth river monitoring data with acoustic doppler current profilers deployed from a boat to verify the accuracy of the drone-based stream data.

Woolpert Chief Scientist Qassim Abdullah devised a process in which the data collected by the drones underwent Pix4D triangular adjustment to produce three-dimensional models of the water surface and river edges to assist the modeling of river velocity using the drone-based doppler velocity radar and large-scale particle image velocimetry. USGS scientists are in the process of evaluating the data and modeling to conclude whether this technology will prove beneficial.

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Abdullah said the Airshow was a success due to the varied contributions from each member of the team, their diverse backgrounds and their shared focus on water research. https://uasweekly.com/2019/06/04/usgs-scientists-test-drone-based-stream-gauging-at-2019-aquatic-airshow/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_06_04_2019&utm_term=2019-06-04

6Jun19

DroneShield to collaborate with Collins Aerospace on anti-drone tech June 5, 2019 Tracy Cozzens

DroneShield Ltd. and Collins Aerospace Systems, a unit of United Technologies, have entered a Memorandum of Understanding to collaborate on opportunities with the Australian military, and globally. The intent is to add DroneShield's counter-drone capabilities to Collins' surveillance systems that its customers are already using. Collins Aerospace is a supplier of aerospace and defense products. In Australia, it holds current contracts within the Australian Defence Force. DroneShield is a public Australian company whose products include a suite of counter-drone technologies capable of protecting bases and forward-deployed groups against enemy drone threats.

DroneShield's products include DroneSentinel (a sensor fusion, multi-method drone detection system), DroneSentry (a combined detection and interdiction system), DroneGun Tactical (a handheld rifle-shaped drone-mitigation device) and RfPatrol (a body-worn drone detection device). https://www.gpsworld.com/droneshield-to-collaborate-with-collins-aerospace-on-anti-drone-tech/

Spanish Architects Put Concrete-Spraying Drone to Work in Construction Malek Murison June 06, 2019

Spanish architecture firm MuDD specializes in solutions for sustainable architecture, facades refurbishments and sustainable housing systems using natural materials. MuDD's tethered drones are being used to spray a cement-like substance onto fabric to solidify lightweight structures.

The team claims that the innovative method removes the need for expensive construction

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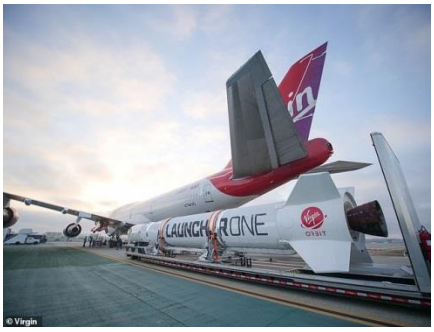
equipment. The technique could be used to put up structures at speed during natural disasters or other emergency situations.

Shotcrete is a type of high-performance concrete that's sprayed through a hose and projected at speed onto a surface. The force of the spray compacts the substance and builds layers of concrete onto the existing base. The flexibility of this construction method has made it the go-to for creating curved surfaces and renovating existing structures, including tunnel linings and domes. https://dronelife.com/2019/06/06/spanish-architects-put-concrete-spraying-drone-to-work-in-construction/

7Jun19

Richard Branson's Virgin Orbit reveals plan to bring its satellite launch business to Japan REUTERS and CHEYENNE MACDONALD FOR DAILYMAIL.COM 6 June 2019

Virgin Orbit announced on Thursday that it plans to bring its LauncherOne system to Japan in partnership with airline operator ANA Holdings Inc, which will provide maintenance and possibly aircraft. The news comes a day after Spaceport Cornwall revealed the concept for its planned launch facility at Cornwall Airport Newquay in the United Kingdom, which is being funded in part by Virgin Orbit.



Virgin Orbit's LauncherOne system is undergoing testing with the aim of launching rockets bearing small satellites into space from a modified jumbo jet. The company said it will conduct its first orbital test flight later this year.

Virgin Orbit and ANA Holdings, parent of All Nippon Airways, in a joint statement said they will identify a launch site together with Space Port Japan, an industry-backed body which aims to turn Japan into a space business hub.

The space venture has already announced launch sites in the United States, Guam, Britain and Italy. https://www.dailymail.co.uk/sciencetech/article-7111121/Richard-Branson-takes-satellite-launch-business-Japan-airline-ANA.html

Aerospace cubesat produces nighttime imagery Debra Werner June 6, 2019

The Aerospace Corp.'s CubeSat Multispectral Observing System (CUMULOS) captured this nighttime image 280 miles above Tokyo.

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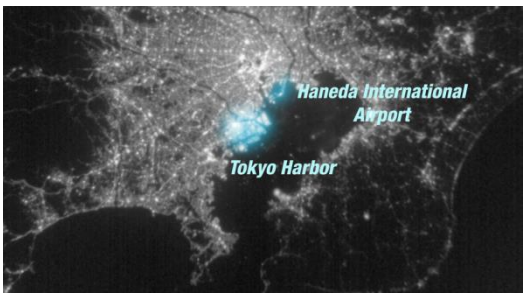

SAN FRANCISCO – The Aerospace Corp. showed it can capture high resolution nighttime imagery with three cameras that fit inside a cubesat measuring ten centimeters on a side.

"We've got what we need to study cities at night and know where the clouds are," Dee Pack, CUMULOS principal investigator and director of Aerospace's Remote Sensing Department. "I don't think anyone has done anything quite like this before in a cubesat. We wanted to assess low-cost, commercial-off-the-shelf uncooled infrared cameras for cloud monitoring.That played in with my desire to image cities at night because you need to know when you have clear skies."
https://spacenews.com/aerospace-cumulos-night-images/

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