



UAS and SmallSat Weekly News

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Drone footage from Beirut shows scale of explosion devastation Scott Simmie Aug. 7th 2020



Some drone footage has emerged from Beirut. It provides a glimpse of the pervasive devastation caused by the explosion earlier this week.

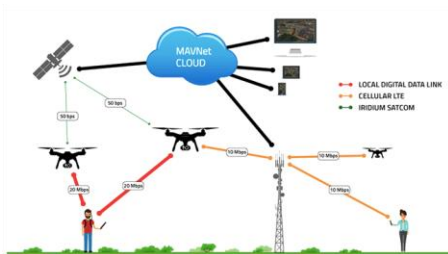
It's difficult to imagine the damage that this week's explosion has wrought on Beirut. A massive shock and explosion decimated the Lebanese capital. It killed

more than 150 people and injured more than 4,000. Many other people are still missing, and presumed dead. And the city itself? Pummeled. The shock wave did far more than take out windows — it caused extensive structural damage. It tore off roofs, destroyed balconies and forced an estimated 300,000 people from their homes. The shockwave is what caused most of the damage.

Ammonium nitrate — 2,750 tons of it — caused the devastating explosion. And, if you haven't seen the moment it all happened, this is what it looked like:

<https://dronedj.com/2020/08/07/drone-video-shows-devastation-following-beirut-explosion/>

Horizon31 Startup Licenses ORNL Global Communication System For UAS August 6, 2020 News



Horizon31, LLC, of Knoxville, Tenn., has exclusively licensed a novel communication system that allows users to reliably operate unmanned vehicles from anywhere in the world using only an internet connection. The technology was developed by the startup's founders at the Department of Energy's Oak Ridge National Laboratory.

The novel software system, called the Multimodal Autonomous Vehicle Network, or MAVNet, enables redundant connections through multiple communication pathways. A pilot can simply login to the drone through the internet and "talk" to the system through a combination of local digital links, cellular services and satellite connections. These redundant options ensure positive control during a flight — even in areas with poor coverage or network lags.



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Uniquely, the system routes data via a central cloud server. Cloud-based data storage allows for multiple people to operate the system simultaneously and for one person to control multiple vehicles. This capability will make commercial-scale fleet management possible, opening the doors to applications in 3D mapping, infrastructure inspection, remote medical supply transport, search and rescue and commercial deliveries.

https://uasweekly.com/2020/08/06/horizon31-startup-licenses-ornl-global-communication-system-for-uas/?utm_source=rss&utm_medium=rss&utm_campaign=horizon31-startup-licenses-ornl-global-communication-system-for-uas&utm_term=2020-08-07

Virginia to Launch Unmanned Aerial Systems Flight Information Exchange August 6, 2020 News



The Virginia Department of Aviation and Center for Innovative Technology today announced the launch of the Virginia Flight Information Exchange pilot program, a tool that will allow state and local governments to share information among unmanned aerial systems stakeholders and address safety and policy concerns while keeping the airspace open, secure and integrated with Federal Aviation Administration control of the national airspace. **Virginia Flight Information Exchange** will ensure the Commonwealth **balances both the safest and most open UAS airspace in the country.**

The Exchange is a platform for state and local government agencies to publish and share advisory information with each other, UAS Service Suppliers, unmanned system operators and the public to promote transparency and public safety. The pilot program will evaluate the benefits of information sharing, inform thoughtful regulation and demonstrate a state-supported approach to UAS communications and coordination.

The pilot program was developed through a public-private collaboration with the Virginia DOAV, CIT and its Virginia Unmanned Systems Center, the Virginia Department of Transportation and Advanced Technology Applications, a data science and engineering company in Northern Virginia. https://uasweekly.com/2020/08/06/virginia-to-launch-unmanned-aerial-systems-flight-information-exchange/?utm_source=rss&utm_medium=rss&utm_campaign=virginia-to-launch-unmanned-aerial-systems-flight-information-exchange&utm_term=2020-08-08



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Drone Sightings Data: The Truth about What the Reports Show Miriam

McNabb August 06, 2020



A [recent report](#) by drone attorney [Jonathan Rupprecht](#) takes a deeper dive into recent drone sightings data. It points out some significant shifts in data – and some major gaps in reporting rules. Reporting rules don't differentiate between legal and unauthorized flights – and as legal commercial flights increase, that leaves questions about the connection between sightings and rogue or unauthorized drones. He finds that sightings over time are *decreasing*, not increasing – and they follow logical patterns. There are more sightings in warmer weather and in populated areas.

"Regardless of where you come from in the industry and your motives, we need to accurately understand the sightings data," says Rupprecht. "Before any more laws are created to regulate drones, we need to step back and see if we really need them. Furthermore, they are just sightings which are not scrubbed for lawful flights. The FAA has approved thousands of flights near airports. How many of the sightings are of lawful?"

<https://dronelife.com/2020/08/06/drone-sightings-data-the-truth-about-what-the-reports-show/>

9Aug20

For Drones in Public Safety, Responsibility Is Everything JED PRESSGROVE JULY 30, 2020



Chula Vista Police Department during a practice and training program involving drones.

Drones have become a [more visible part](#) of American society since the beginning of the COVID-19 pandemic. And while many use cases haven't drawn much scrutiny, occurrences such as unarmed military-grade drones [flying over protests](#) have raised concerns about the intentions of public safety organizations that utilize the technology.

Government agencies have to be careful not to damage the public's trust; otherwise, they may not be able to fly drones anymore. That's the perspective of Charles L. Werner, a retired fire chief who directs DRONERESPONDERS, a program that brings together drone users with "the ultimate objective of maximizing drone operations for public safety."



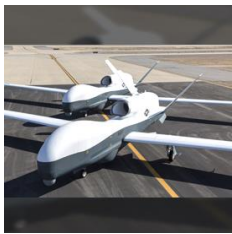
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Earlier this month, DRONERESPONDERS released [“The Five C’s,”](#) which are principles that departments can follow in order to ensure responsible use of drones. The top principle: community engagement and transparency.

“The number one thing that needs to be done is very extensive and transparent engagement with the community,” Werner said. “They have to be well informed of how the drone is going to be used and when it’s going to be used.” The key is being **proactive** rather than reactive. Two recent cases illustrate the importance of this point: <https://www.govtech.com/products/For-Drones-in-Public-Safety-Responsibility-Is-Everything.html>

10Aug20

Navy Plans Triton UAS Test Support Order for Northrop August 10, 2020 News



The Department of the Navy plans to award [Northrop Grumman’s](#) aerospace systems business a delivery order to provide analysis support for demonstration activities involving the MQ-4C Triton unmanned aerial system. Northrop will support testing of net-enabled weapons and other warfighting technologies designed to maintain UAS-driven sea control as part of the award.

NAVAIR intended to sole-source the award to Northrop because of the company's “requisite knowledge and experience” designing, developing and integrating Triton as well as ancillary hardware.

In February, Northrop secured a \$172.4M [contract modification](#) to produce two additional Triton platforms and a ground operating base for the Navy. The award comes a month after the long-distance unmanned aircraft conducted its [maiden flight](#) over the Pacific region. Work under the new order falls under a previously issued basic ordering agreement and is slated to begin on Dec. 1. <https://www.govconwire.com/2020/08/navy-plans-triton-uas-test-support-order-for-northrop/>

Flight Over People: Botlink Scores a Nationwide Waiver from FAA Miriam

McNabb August 07, 2020



Current drone regulations prohibit flight over people except under very specific circumstances – a serious [limitation for many drone applications](#), especially in populated areas. Fargo, ND drone services and development company [Botlink](#) will now be able to explore the possibilities of flight over people,



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however. Botlink has received a nationwide waiver for four years from the Federal Aviation Administration to conduct drone operations over people.

The waiver has taken years of working with the FAA and [proving Botlink's safety case](#) for flight over people. Botlink has worked with the FAA and other drone companies as part of North Dakota's UAS Integration Pilot Program, receiving waivers and demonstrating the potential for drone flight over people at high profile events like the tailgating party prior to the North Dakota State University and South Dakota State University football game, when Botlink and partners provided security for the event. <https://dronelife.com/2020/08/07/flight-over-people-botlink-scores-a-nationwide-waiver-from-faa/>

FAA awards \$3.3M in drone grants to universities August 7, 2020 Allison Barwacz



The Federal Aviation Administration has awarded \$3.3 million in research, education and training grants to universities that comprise the FAA's Air Transportation Center of Excellence for Unmanned Aircraft Systems, also known as the Alliance for System Safety of UAS through Research Excellence. The program is a long-term, cost-sharing partnership between academia, industry and government. The program enables the FAA to work with center members and affiliates to conduct research in airspace and airport planning and design, environment and aviation safety.

Mississippi State University received a grant for \$1,290,410 to provide program management. Six universities, including the University of Alabama–Huntsville (\$1,101,000), New Mexico State University (\$234,000), the University of Alaska, Fairbanks (\$245,000), Mississippi State University (\$130,000), North Carolina State University (\$124,979) and Oregon State University (\$165,000) received grants for Disaster Preparedness and Response. This research will provide insight into the safe integration of UAS into disaster preparedness and response. It will focus on procedures to coordinate with the Department of Interior, the Department of Homeland Security, the Federal Emergency Management Agency and other federal, local and state organizations to ensure proper coordination during emergencies. <https://www.gpsworld.com/faa-awards-3-3m-in-drone-grants-to-universities/>



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Space Dynamics Laboratory Receives the AIAA Small Satellite Mission of the Year Award AUGUST 9, 2020



The Hyper-Angular Rainbow Polarimeter satellite has been awarded the *Small Satellite Mission of the Year* award by the *American Institute of Aeronautics and Astronautics*.

SDL designed and manufactured the HARP spacecraft to carry the University of Maryland Baltimore County Earth and Space Institute-built HARP payload which was developed to **measure the microphysical properties of cloud and aerosol particles** in Earth's atmosphere.

The Award is presented annually by the AIAA Small Satellite Technical Committee to the mission that has demonstrated a significant improvement in the capability of small satellites. Missions must have individual satellite wet mass of less than 150 kilograms and must have launched, established communication and have acquired results from orbit after January 1, 2019. <https://news.satnews.com/2020/08/09/space-dynamics-laboratory-sdl-receives-the-small-satellite-mission-of-the-year-award-from-the-aiaa/>

DDC closes bought-deal offering for aggregate gross proceeds of nearly \$10m

APPLICATION BUSINESS HEADLINE NEWS MANUFACTURER ALEX DOUGLAS AUGUST 10, 2020



Under the offering, the company sold a total of 13,225,000 units at a price of \$0.70 per unit. Each unit is comprised of one common share in the capital of the company and one-half of one share purchase warrant of the company. Each Warrant entitles the holder to purchase one share at a price of \$0.95 until August 5, 2022.

The offering was completed by a syndicate of underwriters co-led by Echelon Wealth Partners and Canaccord Genuity Corporation, and including Cormark Securities Inc.

The company intends to use the proceeds from the Offering to further develop the Company's international prospects, proportionally scale staffing, for the development of new projects and for working capital and general corporate purposes.

<https://www.commercialdroneprofessional.com/ddc-closes-bought-deal-offering-for-aggregate-gross-proceeds-of-nearly-10m/>



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Cranfield Airport deploys drones to conduct automated inspections APPLICATION

NEWS UK ALEX DOUGLAS AUGUST 10, 2020



The flights make use of 'drone-in-a-box' technology with the aim of enabling routine inspections to take place with UAVs that can be automatically deployed, recovered and recharged without the need for an on-site pilot.

In the future, drones could be used to inspect other areas such as perimeter fences and take place regularly – for example, in the morning before the Airport opens and in the evening after closing – to detect damage or the presence of foreign objects which can be dangerous for aircraft.

Rob Abbott, director of Aviation Operations at Cranfield Airport, said: "As a fully-functional research airport located on a university campus, this kind of technology demonstration and development exercise is very much in our DNA.

Edward Anastassacos, managing director of HEROTECH8, the company providing the 'drone-in-a-box' system, said: "We see enormous benefits to using drone-in-a-box technology for industrial inspection and monitoring applications."

<https://www.commercialdroneprofessional.com/cranfield-airport-deploys-drones-to-conduct-automate>

WiBotic Receives Industry-First FCC Approval for High Power Wireless Charging

August 7, 2020 News



WiBotic, a leader in advanced wireless charging and fleet energy management, today announced it received equipment authorization from the Federal Communications Commission for its high power transmitters and receivers. Providing up to 300 watts of wireless power, these products are the **first systems to receive FCC approval** for use in mobile robots, drones and other devices with larger batteries.

WiBotic high power wireless charging systems are strong enough to charge a wide variety of robots, drones and industrial automation equipment. The reliability of wireless charging gives robots and drones greater autonomy, requiring less human intervention and maintenance than contact-based charging systems.

WiBotic is the leader in wireless charging and fleet energy management for the robotics industry and provides next generation hardware and software systems that most customers can



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use out of the box. WiBotic wireless charging has greater range and is more reliable than contact-based systems. With full power delivery within several centimeters of the transmitter, robots can connect to power with greater ease and reliability, improving uptime. WiBotic software enables visualization of battery charging data across a fleet and enables docking algorithms to be fast and reliable. https://uasweekly.com/2020/08/07/wibotic-receives-industry-first-fcc-approval-for-high-power-wireless-charging/?utm_source=rss&utm_medium=rss&utm_campaign=wibotic-receives-industry-first-fcc-approval-for-high-power-wireless-charging&utm_term=2020-08-10

11Aug20

Cyberhawk supports major utility inspect over 50,000 transmission structures

APPLICATION HEADLINE NEWS ALEX DOUGLAS AUGUST 11, 2020



Cyberhawk has secured a contract with a major California-based utility for UAV services. The contract, which was secured earlier this year through a competitive tender process, will support the utility's critical wildfire prevention and reliability campaign. The scope of work includes thousands of UAV inspections of lattice steel towers and wood electricity transmission structures that are part of the golden state's electric networks.

Commenting on the contract win, Cyberhawk's CEO, Chris Fleming, said: "Protecting customers and property during wildfire season is a top priority for US utilities. We're seeing more utilities turn to UAV-based inspection services to bolster their wildfire prevention and reliability programs. We are looking forward to building on this relationship and continuing to provide US utilities with innovative UAV solutions and highly skilled pilots to shore up their inspection and maintenance programs and ensure operations are as safe and resilient as possible."

https://www.commercialdroneprofessional.com/cyberhawk-supports-major-utility-inspect-over-50000-transmission-structures/?utm_medium=push&utm_source=notifications

Vertical Aerospace Set to Unveil Fixed-wing eVTOL Design Charles Alcock

August 10, 2020, 1:04 PM



Vertical Aerospace has briefly revealed a glancing view of what seems to be its new tiltwing eVTOL aircraft.

Vertical Aerospace appears to be preparing to fly, or at least unveil publicly, the first full-scale prototype of its planned

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eVTOL aircraft. On August 10, the UK startup briefly unveiled an animated presentation of what appears to be the fixed-wing aircraft it discussed with media and prospective investors when it completed the preliminary design review in early January.

The fixed-wing design seen on social media and at the company's website appears to have four propellers that look to be in a tilt-wing configuration. To the rear of the fuselage, there seems to be a v-shaped tail, but no other details of the design can be easily discerned.

<https://www.ainonline.com/aviation-news/business-aviation/2020-08-10/vertical-aerospace-set-unveil-fixed-wing-evtol-design>

SpaceX is manufacturing 120 Starlink internet satellites per month AUG 10 2020

Michael Sheetz@THESHEETZTWEETZ



A stack of Starlink internet satellites just before a launch

SpaceX is manufacturing its Starlink satellites at an unprecedented rate for the space industry as the company dives headlong into building a space-based global internet service.

[Elon Musk's](#) company told the Federal Communications Commission in a presentation last month that its Starlink unit is "now building 120 satellites per month" and has "invested over \$70 million developing and producing thousands of consumer user terminals per month."

Starlink is SpaceX's ambitious plan to build an interconnected network of about **12,000 small satellites**, to beam high-speed internet from orbit to anywhere in the world. The company has so far launched nearly 600 Starlink satellites and is currently building a system of ground stations and user terminals to connect consumers directly to its network.

<https://www.cnn.com/2020/08/10/spacex-starlink-satellite-production-now-120-per-month.html>

The Forecast for Passenger Drones is Sky High Miriam McNabb August 10, 2020



According to the new market research report from [MarketsandMarkets](#) on the "eVTOL Aircraft Market ... Global Forecast to 2030", the eVTOL aircraft market is projected to grow from \$162 million in 2025 to \$411 million by 2030, at a CAGR of **20.42%** from 2025 to 2030.

While accurate forecasts of emerging industries are challenging, they can be a good indicator of where a sector is heading. "The growing demand for an alternative mode of transportation in



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urban cities due to increasing road traffic congestion globally is a major factor driving market growth,” says Markets and Markets. [Urban Air Mobility](#) is certainly a significant discussion worldwide – but additionally, passenger drones or “optionally piloted” vehicles have a multitude of commercial uses. <https://dronelife.com/2020/08/10/forecast-for-passenger-drones-is-sky-high/>

Perpetual Motion Debuts Revolutionary Drone Disinfectant Technology August 11, 2020 News



Perpetual Motion, a new company addressing disinfecting protocol shortcomings in the wake of COVID-19, today announced the launch of its new drone-powered disinfecting technology for large indoor venues and outdoor facilities.

Perpetual Motion is a distributorship that combines the drone from Lucid Drone Technologies with eco-friendly chemistry from and expert-backed support to enable the large-scale disinfecting needs of learning institutions and athletic facilities seeking safe, sanitary and seamless re-openings.

Perpetual Motion is the first to bring to market drone technology combined with an EPA-approved, hospital and food-grade disinfectant. This agent is safe for plants, animals and humans with zero harsh residuals and no burn. Once it is applied to disinfect, the antimicrobial coating adheres to any surface, providing an “armor shield” coat that’s effective for up to a year for continuous protection. Titania creates activated hydroxyl radicals to extract airborne contaminants and reorganizes their molecular structures into harmless everyday compounds. Organic materials coming in contact with the solution will break down upon contact, making it ideal for high-capacity venues that require thorough protection.

https://uasweekly.com/2020/08/11/perpetual-motion-debuts-revolutionary-drone-disinfectant-technology/?utm_source=rss&utm_medium=rss&utm_campaign=perpetual-motion-debuts-revolutionary-drone-disinfectant-technology&utm_term=2020-08-11

SqwaQ Demonstrates BVLOS UAS Flight Capabilities for Controlled Airspace

August 11, 2020 News



The technology enables drones, helicopters, air taxis and other connected aircraft to share the same airspace rather than being segregated. SqwaQ enables safe integration into controlled airspace while also resolving Remote Aircraft ID, Pilot Credential Verification,



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Flight Path Management and other challenges that have limited UAS operations.

The SqwaQboard is a compact, 3"x6"x1" communication module weighing 270 grams that aggregates six 3G/4G LTE connections into one, multi-redundant data pipe to broadcast four pilot view and downward cameras or sensors simultaneously, plus multi-redundant command and control and headroom for an array of avionics like Mode-S transponder, ADS-B in/out and VHF radio.

The company worked with regulators and cellular network owners for over 2 years and can provide customized bandwidth services on 600 cellular networks across 130 countries and roaming across regions like North America or the entire EU. Users can fly across wide regions without losing connectivity because the six modules can roam across dozens of cellular networks simultaneously. https://uasweekly.com/2020/08/11/sqwaq-demonstrates-bvlos-uas-flight-capabilities-for-controlled-airspace/?utm_source=rss&utm_medium=rss&utm_campaign=sqwaq-demonstrates-bvlos-uas-flight-capabilities-for-controlled-airspace&utm_term=2020-08-11

Subterranean Challenge Pivots to All-Virtual Competition for Cave Circuit August 11, 2020 Military News



DARPA's Subterranean Challenge focuses on discovering innovative approaches to map, navigate and search complex underground environments across three diverse subdomains: human-made tunnels, urban underground and natural cave systems. The date for the Cave Circuit Virtual Competition webcast/public event will be announced in the coming weeks.

Teams must qualify by September 15 to participate which includes [team registration](#) and registration on the [SubT Challenge Virtual Portal](#). Additional details are available in the [SubT Qualification Guide](#) available on the program's [Resources Page](#). Interested teams also are encouraged to join the [SubT Community Forum](#), where they can engage with other participants and ask questions.

Cave Circuit self-funded Virtual teams may compete for one of three top prizes, provided they finish in the top five overall ranking: \$250,000; \$150,000; or \$100,000, respectively.

https://uasweekly.com/2020/08/11/subterranean-challenge-pivots-to-all-virtual-competition-for-cave-circuit/?utm_source=rss&utm_medium=rss&utm_campaign=subterranean-challenge-pivots-to-all-virtual-competition-for-cave-circuit&utm_term=2020-08-11



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AEROVIRONMENT INTRODUCES ENHANCEMENT OPTIONS FOR ITS UAS PRODUCT LINE AUVSI NEWS AUG 11, 2020



The first product enhancement option is the optional Puma Smart 2500 Battery, which is available for Puma LE UAS. The battery allows operators to achieve an extended flight time of **6.5 hours**. Featuring an improved capacity of 24.5Ah (amp-hours), the high-energy-density, lithium-ion battery pack still manages to retain the size and form factor needed to be integrated into Puma LE's battery bay.

The second enhancement option is AeroVironment's Puma **Bungee Launch System**, which is now available as an enhancement option for Puma 2 AE and Puma 3 AE. A military-grade launcher, the BLS allows Puma AE UAS to be launched with assistance in environmental conditions where hand launch is not practical or is limited. Lightweight and portable, the system can be set up and operational in less than 10 minutes. <https://www.auvsi.org/industry-news/aerovironment-introduces-enhancement-options-its-puma-uas-product-line>

Drone Parachute: See Percepto's Integrated Parachute in Action [VIDEO] Miriam McNabb August 11, 2020



Israel's [Percepto](#) claims to be the **most deployed** autonomous drone-in-a-box solutions with Fortune 500 customers in more than 10 countries. Part of the way they achieve that level of deployment is through an emphasis on safety – paramount for any system designed to operate without the necessary intervention of human pilots. Percepto has now announced the latest weapon in their arsenal: an integrated drone parachute.

The Percepto Sparrow is “the **first on the market** to offer an ASTM 3322-18 compliant integral parachute after completing more than 50 successful test flights,” says a press release.

“...The parachute feature is compliant with FAA standards and will expedite further the approvals for flying over people and beyond the visual line of sight for Percepto's Fortune 500 customers.” <https://dronelife.com/2020/08/11/drone-parachute-see-perceptos-integrated-parachute-in-action-video/>



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The DroneUp Patent Shows Why Tom Walker Rules His Space Miriam McNabb August 11, 2020



Three years ago, Tom Walker and his partners had a great idea. What if there were an automated system that allowed a central agency to enter a job into a pilot network database; figure out which pilots were appropriate, available, and local; and then send them the job offer via an app? When the right pilot for the job accepted, the requestor could send more details on the job directly to them. Investors loved it, pilots raved about it.

That patent – Multiplexed Communications for Coordination of Piloted Aerial Drones Enlisted to a Common Mission – has now been granted. The patent issued today by the PTO relates to a web-based platform for managing and communicating with drone pilots and assigning them missions. Once you get through the verbiage about “multiplexed communications” and “multiple piloted assets” the concept is (relatively) simple: use a mobile app to assign drone missions to a pilot. It’s the same concept that has allowed Walker, who founded DroneUp in 2016 and is listed as an inventor on the patent, to build a network of licensed, vetted and trained pilots; keep them working; and make it pay. <https://dronelife.com/2020/08/11/droneup-patent/>

CAMCOPTER S-100 UAS Selected for UK Coastguard’s First SAR Missions 10 Aug 2020 Mike Ball



[Schiebel's](#) CAMCOPTER S-100 UAS has been selected to support search and rescue missions for the UK’s HM Coastguard in maritime and mountain environments in north Wales. This marks **the first time** that HM Coastguard has used unmanned aircraft for search and rescue.

Two CAMCOPTER UAS have undertaken a three-month test program and will be operated by Bristow, who provide the HM Coastguard Search and Rescue Helicopter Service. The unmanned aircraft will support manned helicopters in safety patrols across beaches from Conwy Bay to Llandudno and inland search and rescue across Snowdonia.



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The program has been designed to complement work being carried out by the Maritime and Coastguard Agency to develop regulations under which UAVs can operate as SAR aircraft.

https://www.unmannedsystemstechnology.com/2020/08/camcopter-s-100-uas-selected-for-uk-coastguards-first-sar-missions/?utm_content=bufferf442e&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

“Major operational milestones” see sales boom for Workhorse Group in Q2 **financials** APPLICATION BUSINESS FINANCIAL HEADLINE NEWS INTERNATIONAL ALEX

DOUGLAS AUGUST 12, 2020



Sales for the second quarter of 2020 were recorded at \$92,000 compared to \$5,500 in the second quarter of 2019. Cost of goods sold increased to \$1.5m from \$930,000 in the second quarter of 2019 driven by increases in labor and materials relating to costs for the C-Series production. Selling, general and administrative expenses increased to \$3.9 million from \$2.0 million in the same period last year, down to increases in consulting expenses, higher employee related costs and incentive stock expenses.

The firm's CEO, Duane Hughes, explained: “In the first half of this year we accomplished a series of major operational and EV industry milestones, culminating in the **first official deliveries of our C-Series trucks** to Ryder just a few weeks ago. We are now the only medium duty BEV OEM permitted and able to sell and deliver our vehicles in **all 50 states**, which should allow us to further distance ourselves as the first movers in the last-mile EV space.

<https://www.commercialdroneprofessional.com/major-operational-milestones-see-sales-boom-for-workhorse-group-in-q2-financials/>

13Aug20

PrecisionHawk awarded US patents for its UTM technology Josh Spires Aug. 12th 2020 9:59 am ET



Yesterday [PrecisionHawk](#) was awarded two US patents for technology it developed for its [unmanned traffic management \(UTM\)](#) system. The two patents allow drones and manned aircraft to avoid each other while in flight.

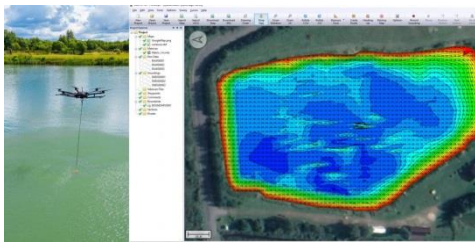
[The patents](#) enable collision avoidance by transmitting real-time flight data from drones in the air to a UTM server before and during the flight. The first patent



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is for the technology that sends the real-time data to the flight servers. The second patent transmits their flight plan to traffic management before the flight to see if there are potential conflicts. The traffic management server receives similar data about other drones and manned aircraft in the area, and if there is, it will send the drone pilot an alert to adjust the flight plan to avoid the collision. <https://dronedj.com/2020/08/12/precisionhawk-awarded-us-patents-for-its-utm-technology/>

SPH Engineering and Eye4Software partner to survey underwater Josh Spires Aug. 12th 2020



SPH Engineering, a software developer for the UgCS app, has partnered with the app's creator Eye4Software to advance bathymetric and hydrological [surveying](#). The system would allow drone operators to capture contour maps, depth maps and 3D models.

Earlier in the year, the SPH Engineering team announced the launch of a drone with an integrated echo sounder allowing surveys of coastal and inland waters. The real-time data allows for mapping, measuring, inspections and environmental monitoring.

[The system](#) will consist of a drone equipped with a single or dual-frequency echo sounder controlled automatically via a pre-planned flight route and the use of the UgCS software and app.

SPH Engineering and Eye4Software worked together to ensure the files created onboard the drone are compatible and the data is not corrupted in the process. The system generates NMEA 0183 with the bathymetric data and a full color SEG-Y file for the echo sounder data. See the video: <https://dronedj.com/2020/08/12/sph-engineering-and-eye4software-partner-to-survey-underwater/>

Could drones disguised as birds of prey be used to scare birds? Josh Spires Aug. 12th 2020



One of the [peskiest birds](#) in the suburbs of [Perth, Australia](#), is the Corella. They rip up irrigation systems, cables, and destroy trees, but can drones scare them off? Perth doctor Jean-Paul Orsini thinks they could be a possible solution to the problem.

The idea is to disguise drones as birds of prey and fly them into



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an area where the Corella birds are destroying property. The pests should then get scared of the “bird of prey” and fly off and eventually not return to the spot.

Orsini also shared his research that suggests culling the birds doesn’t have an effect on their overall population, as they just breed somewhere else and invade again. BirdlifeWA president Viv Read has joined in on the conversation, saying drones shouldn’t be the solution as they will scare off other bird species that are wanted or needed due to their noise. She said we can manage the Corella population by removing weeds the birds are known to like.

Do you think drones should be used to scare off the birds? Or should the weeds be removed from the area? Let us know what you think in the comments below.

<https://dronedj.com/2020/08/12/could-drones-disguised-as-birds-of-prey-be-used-to-scare-birds/>

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What you can see with a drone: Amazing photographs 108 PHOTOS Aug. 11, 2020



Marco and his daughter enjoy the sun in his pool in the garden in Zurich, Switzerland, Thursday, July 30, 2020.

See them all:

<https://www.usatoday.com/picture-gallery/tech/news/2018/07/03/what-you-can-see-with-a-drone-amazing-photographs/36581467/>

Ingenuity Mars helicopter recharges its batteries in flight AUGUST 13, 2020



The Ingenuity Mars Helicopter can be seen between the left and center wheels of the Mars 2020 Perseverance rover. The image was taken in the vacuum chamber at JPL

NASA's Ingenuity Mars Helicopter received a checkout and recharge of its power system on Friday, Aug. 7, one week into its near seven-month journey to Mars with the

Perseverance rover. This marks the **first time** the helicopter has been powered up and its batteries have been charged in the space environment.

During the eight-hour operation, the performance of the rotorcraft's six [lithium-ion batteries](#) was analyzed as the team brought their charge level up to 35%. The project has



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determined a low charge state is optimal for battery health during the cruise to Mars. Tim Canham, the operations lead for Mars Helicopter at NASA's Jet Propulsion Laboratory in Southern California said "Since everything went by the book, we'll perform the same activity about every two weeks to maintain an acceptable state of charge."

The 4-pound helicopter is currently stowed on Perseverance's belly and receives its charge from the rover's [power supply](#). Once Ingenuity is deployed on Mars' surface, its batteries will be charged solely by the helicopter's own solar panel.



"This charge activity shows we have survived launch and that so far we can handle the harsh environment of interplanetary space," said MiMi Aung, the Ingenuity Mars Helicopter project manager at JPL. <https://phys.org/news/2020-08-ingenuity-mars-helicopter-recharges-batteries.html>

New York Project Will Explore Delivery, Passenger Drones Jason Reagan August 13, 2020



A New York county is flying high after scoring almost **\$1 million** from NASA to research delivery and passenger drones.

The nation's top aeronautic agency awarded Oneida County \$897,000 to develop Advanced Air Mobility at the [New York UAS Test Site](#) (Griffiss International Airport).

"The goal of the research is to develop technology that will support safe, secure, resilient and efficient heavy-lift UAS cargo delivery and passenger carrying," a county spokesperson said.

Owned by Oneida County, the test site is one of seven [FAA-Designated UAS Test Sites](#) and is managed by [NUAIR](#). The site is also part of the 50-mile UAS Traffic Management corridor spanning from Rome to Syracuse. Last year, Gov. Andrew M. Cuomo [announced the completion of the corridor](#). It includes BVLOS testing and advanced drone operations. <https://dronelife.com/2020/08/13/new-york-grant-will-explore-delivery-passenger-drones/>