



UAS and SmallSat Weekly News

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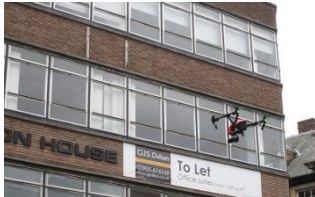


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7Jul18

Council deploys UAV as eye-in-the-sky in battle against seagulls APPLICATION

NEWS EMMA CALDER JULY 3, 2018



UAVs cameras were flown over the high street to detect hard-to-reach gull nests. The newly-discovered nests will be targeted as part of Worcester City Council's work to control gull numbers in the city by **replacing the birds' eggs with life-like dummies**, to bring down the numbers of chicks that hatch there.

"We would never have been able to spot these nests from the ground, so to get a bird's eye view is enormously helpful as we increase our efforts to control gull numbers in the city." Since the programme began, the number of breeding pairs has fallen from 317 to 192.

"If fewer chicks hatch each year in Worcester, that means there will be fewer adult birds around to make noise, scavenge food and spread their droppings on our buildings and pavements." http://www.commercialdroneprofessional.com/council-deploys-uav-as-eye-in-the-sky-in-battle-against-seagulls/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-267005-Commercial+Drone+Professional+DNA++2018-07-04

US startup pollinating plants when bees can't July 5, 2018 Feilidh Dwyer



[Bee populations are in decline](#) across the globe due to pressures on their habitats and the increasing use of [toxic fertilisers such as Roundup](#). At the end of last year, [the bumblebee was put on the US endangered species list](#).

A staggering number of crops (and ultimately foods) are pollinated by bees. So when bees aren't around to do their thing, how do we keep our crops going?

[New Atlas](#) reports that US startup [Dropcopter](#) is proving its ability to pollinate crops. The company uses pollen bombs which have been shown to increase pollination rates between 25-60 percent. The drones fly back and forth over crops and can cover 40 acres per hour as well as fly at night (when bees are asleep) and in all weather conditions.

Bees are 'designed' for pollination and due to their small size, can fly into each flower and extract the pollen from inside. The pollen sticks to their feet and when they land in the next



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flower, some of the pollen from the male reproductive part of the flower rubs onto the female reproductive part of the flower and boom: fertilization is possible and fruit carrying seeds may develop. Dropcopter is more of a blunt instrument and will not get every single plant as effectively as bees can. Instead, they bomb a massive area, and some of the pollen inevitably lands in exactly the right spot.

The company recently secured a \$250,000 investment from a New York accelerator and will be seeking further funding to continue to test and improve its flight path efficiency.

<https://www.wetalkuav.com/us-startup-pollinating-plants-when-bees-cant/>

Airobotics Defines How the “Drone in a Box” Model is Working for Mining, Quarry and Construction Applications July 5, 2018 Jeremiah Karpowicz



customers to use their technology.

We caught up with Efrat Fenigson, VP of Marketing at Airobotics, and talked with her about the biggest changes that have been taking place in the drone industry, how Airobotics has been able to sort through regulatory challenges in a variety of places and what it means for their



milestones:

Efrat Fenigson: Our growth has been exponential over the past year as we've been enhancing our technology and more industries are beginning to utilize drones in the industrial and commercial sectors. We have grown our team to over **250 employees**, we've expanded the number of countries we work in to the **United States**, New Caledonia, and Chile, and have announced several new customers. Some of our achievements and

- Logged more than 30,000 automated drone flights
- Raised **\$71 Million** to date in 3 rounds of funding
- **Certified to fly Beyond Visual line of Sight in Australia and Israel, and certified VLOS in US, Chile and New Caledonia, soon to be upgraded to BVLOS.**
- Named by The Wall Street Journal as a top tech company to watch (See [here](#) for more)
- Partnered with Shapir-Ashtrom for the construction of Israel's new "Gulf Port" (See [here](#) for more)
- Partnered exclusively with engineering company RockBlast to allow Chilean mining companies to utilize Airobotics system (See [here](#) for more)

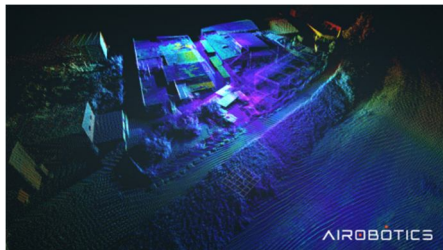


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- Senior Google and Facebook Executive Richard Wooldridge joined Airobotics (See [here](#) for more)
- Honored by Fast Company as one of the world's most innovative companies (See [here](#) for more)

Governments and regulatory bodies are working with drone companies to develop programs and legislation to allow drone usage in urban areas and industrial sites. Seeing them take the commercial use of drones more seriously over the past year has really excited us.

Technology, such as cameras and sensors, has improved. Take LiDAR for example. The "scan" happens in two methods: a laser head rotates 20x per second emitting 300,000 laser points a second. At the same time, the drone moves over the area of interest at up to 10 m/s. This provides high resolution and rapid coverage of complex areas. This intersection of resolution, accuracy, and coverage capabilities meet at a point which satisfies surveying and inspection applications demanded by our customers on a daily basis.

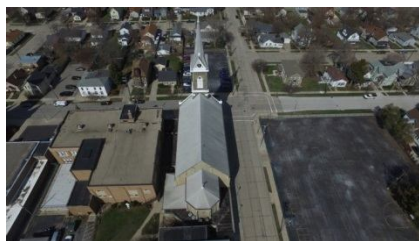


This LiDAR elevation model was created in less than 20 seconds of an Optimus drone flight.

Our Research and Development focus is on supporting wider coverage areas, longer flight durations (thanks to battery optimization) and operating in tougher weather

conditions. https://www.expouav.com/news/latest/airobotics-defines-how-the-drone-in-a-box-model-is-working-for-mining-quarry-and-construction-applications/?utm_source=informz&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter

Roofing Consultant Finds Success With New Drone Betsy Lillian July 5, 2018



Interstate Roof Systems Consultants Inc. (IRSC), a national roofing consultant with offices in three states, is touting the success of its new infrared camera-equipped drone in its collection of diagnostic tools.

According to the company, its new DJI Inspire 1 drone equipped with a FLIR Zenmuse XT infrared camera **can reduce the time** for a roof assessment by as much as **50%**. The aircraft also has access to angles and perspectives not available via standard inspection techniques, notes IRSC, which operates in Wisconsin, Colorado and Illinois.



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Furthermore, says the company, drone technology tremendously enhances project safety, as workers don't have to navigate rooftop obstacles, dangerous pitches or inclement weather.

"Our new drone technology creates access to roofs that are typically out of reach or extremely costly to access – ones that often require expensive lifts or a crane with a man-basket," says David Velcheck, president of IRSC. https://unmanned-aerial.com/roofing-consultant-finds-success-with-new-drone?utm_medium=email&utm_source=LNH+07-06-2018&utm_campaign=UAO+Latest+News+Headlines

Boeing invests in UAV urban delivery startup company Patrick C. Miller | July 05, 2018



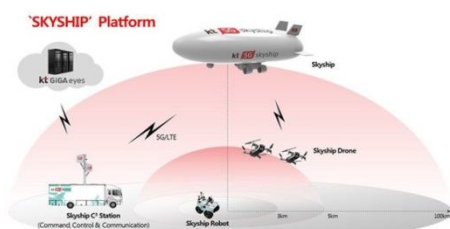
Boeing's HorizonX Ventures is investing in Matternet, a California-based startup company specializing in unmanned aerial vehicle (UAV) delivery operations in urban environments.

Matternet plans to combine its logistics platform with Boeing's expertise in logistics, integration and manufacturing to enable more reliable and efficient cargo air transportation. Last year, Matternet became the world's first company to receive authorization in Switzerland to launch UAV operations over densely populated areas.

Boeing HorizonX Ventures led the **\$16 million**, Series A investment in Matternet, which includes participation by Swiss Post, the Sony Innovation Fund and Levitate Capital.

"Matternet's technology and proven track record make the development of a safe, global autonomous air mobility system a near-term reality," said Brian Schettler, managing director of Boeing HorizonX Ventures. <http://uasmagazine.com/articles/1883/boeing-invests-in-uav-urban-delivery-startup-company>

KT Unveils 5G Emergency Rescue Platform 'SKYSH' July 6, 2018 News



KT Corp., South Korea's largest telecommunications company, has unveiled a next-generation platform for disaster and safety management, in its latest effort to pioneer new businesses with its fifth-generation and

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information and communications technologies. KT introduced the new platform, named SKYSHIP, at a press briefing last week. The SKYSHIP platform operates a special aircraft and a mobile communication center to remotely control drones and robots that carry out search and rescue operations for disaster survivors. Rescuers on the ground are also assisted with **augmented reality glasses** that have a direct line of communication to doctors at nearby hospitals for assistance delivering emergency treatment.

The Korean telecom leader is gearing up to diversify its business as it prepares for the launch of the world's first nationwide 5G wireless network in March next year. At last week's press briefing, KT demonstrated SKYSHIP in real time through a disaster simulation. The platform facilitated a remote search and rescue in conjunction with Ajou University Hospital's trauma center in Gyeonggi province, south of Seoul, and a local 119 emergency rescue team. The location of a disaster survivor was identified by the SKYSHIP platform, and a rescue squad then used AR eyewear to carry out necessary emergency procedures.

Through KT's LTE network, the rescue squad was able to instantly share data and communicate with renowned surgeon Professor Lee Guk-Jong — enabling the doctor to check the survivor's health status and conduct remote treatments from the trauma center.

http://uasweekly.com/2018/07/06/kt-unveils-5g-emergency-rescue-platform-skyship/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_06&utm_term=2018-07-06

9Jul18

88% of companies see ROI within 12 months of integrating UAVs, report reveals

BUSINESS HEADLINE NEWS EMMA CALDER JULY 9, 2018



Drones will quickly pay for themselves, despite the substantial outlays attached to integrating them into business, an industry report has claimed.

A Blue Research report, which was commissioned by commercial drone services and software provider Skyward, found that 88% of companies see ROI within 12 months of introducing drones to their business.

The online research from the Verizon company sampled 1,736 individuals working for companies with \$50m or more in revenue to understand the incidence of drone use. While 34%



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of surveyed participants stated that their company invested less than \$10,000 in drone technology, 40% funneled over \$50,000 into UAV integration.

Nearly one in five respondents said they use or expect to use drones in the future, and 84% said they expect their company's total number of drone flights to increase this year. The study suggests that drone use is on the rise across all industries, led by the construction and engineering sector with a 35% adoption rate. http://www.commercialdroneprofessional.com/88-of-companies-see-roi-within-12-months-of-integrating-uavs-report-reveals/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-267606-Commercial+Drone+Professional+DNA++2018-07-09

Drone Regulations in U.S. Withstand a Hobbyist's Legal Challenge Alan Levin Andrew M Harris July 6, 2018

The U.S. **government's ability to police hobbyist drone use was upheld** by an appellate court Friday in a ruling that helps set the stage for a series of new restrictions and requirements aviation regulators hope to enact soon. "Because the rule is within the agency's statutory authority and is neither arbitrary nor capricious, the petition for review is denied," wrote Judge Merrick Garland, who authored the opinion for the panel.

Friday's ruling is at least a partial win for companies including [Alphabet Inc.](#)'s Project Wing and [Amazon.com Inc.](#)'s Prime Air, which have [urged regulators](#) and lawmakers to impose additional standards on the millions of people who fly hobbyist drones. Such requirements are needed to ensure that it's safe to operate the autonomous delivery systems they are developing, the companies say.

The FAA plans to release proposed new regulations later this year that will begin allowing drone flights over crowds and will require most or all of the devices to begin identifying themselves with radio beacons. The identification beacons are needed to satisfy U.S. security and law enforcement agencies, which fear the devices will be used by criminals or terrorists. <https://www.bloomberg.com/news/articles/2018-07-06/drone-regulations-in-u-s-withstand-a-hobbyist-s-legal-challenge>

San Andreas Fault Scanned with Drone LiDAR Technology 05 Jul 2018 Mike Rees



The Department of Geological Sciences at [San Diego State University](#) (SDSU) has teamed with [Geodetics Inc.](#), a manufacturer of



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mobile mapping systems that utilize passive and active vision sensors (LiDAR/Camera), to research the San Andreas Fault in southern California.

The research is focusing on evaluating both past large slip events (earthquakes) and aseismic creep (also known as “silent earthquakes”), which are tremors that release their energy over weeks or months rather than seconds. It is looking to discover new fault zones and active fault traces, which are visible marks where a geological fault meets the ground surface. The research is also looking to detect fault slip that has resulted from past earthquakes.

“LiDAR mapping represents a very **exciting technology for geology** since it enables the generation of accurate 3D mapping, even in the vertical component where classical photogrammetry techniques are lacking,” said Dr. Allen Gontz, Professor and Chair of Geological Sciences at San Diego State Univ.

<http://www.unmannedsystemstechnology.com/2018/07/san-andreas-fault-scanned-with-drone-lidar-technology/>

A Bird's-Eye View: Development of an Operational ARM Unmanned Aerial Capability for Atmospheric Research in Arctic Alaska [Gijs de Boer](#) *University of Colorado Boulder, and NOAA/Earth System Research Laboratory, Boulder, Colorado 27 June 2018*

Over the last three years, the U.S. Department of Energy has supported various flight campaigns using unmanned aircraft systems and tethered balloon systems at Oliktok Point, Alaska. These activities have made in-situ measurements of the thermodynamic state, turbulence, radiation, aerosol properties, cloud microphysics, and turbulent fluxes to provide a **detailed characterization of the lower atmosphere**.

Alongside a suite of active and passive ground-based sensors and radiosondes deployed by the DOE Atmospheric Radiation Measurement program, these flight activities demonstrate the ability of such platforms to provide critically needed information. In addition to providing new datasets, lessons learned during initial campaigns have assisted in the development of an exciting new community resource. <https://journals.ametsoc.org/doi/abs/10.1175/BAMS-D-17-0156.1>

Army Issues Draft RFP for Tactical UAS, Logistics Support *Monica Jackson on July 09, 2018 Industry News*



The Army Contracting Command has drafted a solicitation notice for a potential **\$78 million** contract for the procurement of two non-developmental tactical unmanned aerial systems and related logistics support services.

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A draft request for proposals [posted July 2](#) on FedBizOpps says the contracting effort is part of the ACC-Aberdeen Proving Ground Natick Contracting Division's plan to buy operational UAS for two Army units. The demonstration seeks to address requirements stated in the 82nd Airborne Division's operational needs statements and help define criteria for the Future UAS Initial Capabilities Document.

The firm-fixed-price contract will include training, maintenance, sustainment and operational support work. Interested parties can submit feedback on the draft RFP through Aug. 1.

<http://blog.executivebiz.com/2018/07/army-issues-draft-rfp-for-tactical-uas-contractor-logistics-support/>

10Jul18

Hollywood movies that feature drone shots! July 10, 2018 Thomas Luna



Ever since the [FAA](#) gave six aerial photo and video production companies clearance to film with UAVs in September 2014, more drone shots have appeared in US movies. Compared to filming on helicopters, **drones cost less to operate, and they can reach hard-to-reach angles** thanks to their low-profile design.

Skyfall's opening scene featured a motorcycle chase that was partially shot with a drone called Flying Cam in Istanbul. It was the **first** movie that used a drone for up-close action scenes, which was a turning point for UAVs in the film industry. "The way the motion of the drone is tracking the two bikes would be kind of impossible with any other tool," said Aerial Cinematographer Randy Slavin.

TIME reported a drone was used in a scene in **Jurassic World**. The bird's-eye view from a UAV provided a perspective that was equivalent to that of a flying dinosaur, or a pterosaur to be exact.

The Fate of the Furious filmed action scenes in Georgia and Cleveland using a drone. Aerobo shot drone footage of cars flying off a parking structure.

Aerobo's X8 drone for cinema.



HBO's **Game of Thrones** is just one of many popular TV shows that used drones to film scenes.

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Expect more drone shots in future Hollywood films!

<https://www.wetalkuav.com/hollywood-movies/>

China dominates armed-drone market by selling to customers in terrorist hotbeds Ben Wolfgang - The Washington Times - Monday, July 9, 2018

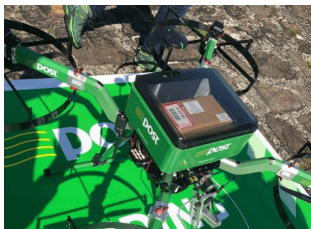


[China](#)'s no-rules approach to armed drone exports has [Beijing](#) positioned to dominate the rapidly growing multibillion-dollar market, frustrating American companies while presenting real national security dangers for the Trump administration.

Behind the scenes, industry watchers say, the Trump administration is **scrambling** to fashion a coherent policy toward military unmanned aerial systems sales that allows American firms to tap the huge international demand for drones while ensuring that state-of-the-art weapons don't fall into the wrong hands.

By contrast, [China](#) has shown itself willing to sell to just about anyone, including customers in terrorist hotbeds such as [Pakistan](#), threatening to render America's policy scruples obsolete. Although [China](#)'s goal is simple — to make money and control a cutting-edge, high-technology, high-value market — **the U.S. approach is murky at best**. Decisions on which countries are allowed to buy American drones are made on a case-by-case basis, with no firm list on which nations can purchase them at any given time, and a lack of basic data on how many UAS are sold each year and to whom. <https://www.washingtontimes.com/news/2018/jul/9/china-dominates-armed-drone-market-sales-terrorist/>

Rothar to rotor: Postman Padraig is Ireland's first postal drone John Kennedy



*Move over Amazon, **Ireland's postal service** is already in the lead on drone deliveries.*

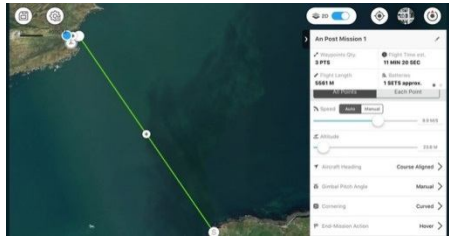
A drone nicknamed 'Postman Padraig' is understood to have made [An Post](#)'s **first ever autonomous drone parcel delivery**.

Last Thursday (5 July) at around 3.30pm IST, the drone, understood to be a DJI Phantom, delivered a parcel from Roonagh Pier in Mayo to Clare Island. While the package was a mere trinket for a customer in a lighthouse, it nevertheless signals a new era for



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postal delivery. It is understood that An Post is considering more plans to incorporate drones to complement its service in rural areas.

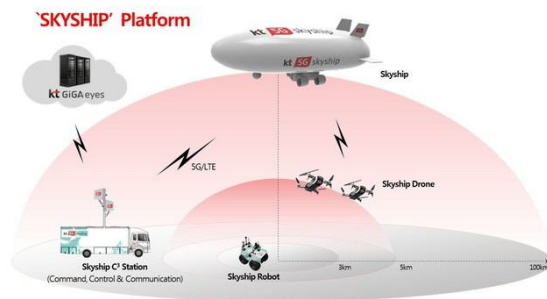


Postman Padraig's journey from the pier to the lighthouse took approximately 11 minutes.

The drone delivery came after months of planning and the mission was dubbed 'Rothar to Rotor'.

While it is just a test mission for now, An Post said it plans to see how the technology can benefit people who live in secluded areas. Post added that it will not replace the regular postal service any time soon. <https://www.siliconrepublic.com/machines/an-post-postman-padraig-drone>

Unmanned Airship to Control Search & Rescue Drones & Robots 06 Jul 2018 Mike Rees



[KT Corp.](#), a South Korean telecommunications company, has unveiled a next-generation platform for disaster and safety management. The SKYSHIP platform operates an unmanned airship and a mobile communication center to remotely control drones and robots that carry out search and rescue operations for disaster survivors. Rescuers on the ground are also assisted with augmented

reality glasses that have a direct line of communication to doctors at nearby hospitals for assistance delivering emergency treatment.

At a press briefing, KT demonstrated SKYSHIP in real time through a disaster simulation. The platform facilitated a remote search and rescue in conjunction with Ajou University Hospital's trauma center in Gyeonggi province, south of Seoul, and a local 119 emergency rescue team. The location of a disaster survivor was identified by the SKYSHIP platform, and a rescue squad then used AR eyewear to carry out necessary emergency procedures.

Through KT's LTE network, the rescue squad was able to instantly share data and communicate with a doctor to check the survivor's health status and conduct remote treatments from the trauma center. http://www.unmannedsystemstechnology.com/2018/07/emergency-rescue-unmanned-airship-to-use-5g-communications-technology/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=56e0fc2ab-eBrief_2018_July_10&utm_medium=email&utm_term=0_6fc3c01e8d-56e0fc2ab-119747501



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Will drones gradually replace fireworks at public events? July 10, 2018 Feilidh Dwyer



In the last few years, drone light displays have started showing up during big public spectacles instead of fireworks. They were featured at both the opening and closing ceremonies of this year's Pyeongchang Games, and in 2017, drones made an appearance during the Superbowl half time show. Is this a trend that is set to continue?



While Americans spent more than [\\$1 billion](#) on fireworks this year alone, several states have total bans in place and multiple others only allow non-aerial fireworks.

Once you have your fleet of drones, you can reuse them hundreds of times and arrange them in as many intricate patterns as your mind can imagine. By comparison, commercial fireworks are a one-and-done type deal and are by no means cheap. The New Year's Day firework display at the Sydney Harbour Bridge is world famous and undeniably spectacular but also [costs \\$7 million Australian dollars](#) (5.2 million USD). After the end of the display, all you're left with is the smell of smoke and gunpowder and a pile of spent fireworks.



The annual New Year's Day fireworks display in Sydney, Australia. Maybe it really is worth the 5 million + USD price tag?

images in the sky.

Drones can create all sorts of incredible patterns in the sky that fireworks are simply not capable of. Drones displays can be synched with music, spell out words or create moving three-dimensional

Few people have proposed that drone light shows replace public fireworks displays entirely. Fireworks are so deeply rooted in public ceremonies around the world that they are likely here to stay for many decades to come. That being said – drones are playing an increasing role in



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public spectacle and pushing the boundaries of what's possible in the night sky.

<https://www.wetalkuav.com/will-drones-gradually-replace-fireworks-at-public-events/2/>

Northeastern University Innovation Center wins \$1 million C-UAS research grant

July 9, 2018 Philip Butterworth-Hayes Counter-UAS systems and policies



The US Department of the Air Force has announced a \$977,075 award to the George J Kostas Research Institute for Homeland Security, part of Northeastern University (<https://www.northeastern.edu/kostas/>), for research into **UAS detection and counter-UAS technologies**. No other details are available. <https://www.unmannedairspace.info/counter-uas-systems-and-policies/northeastern-university-innovation-center-wins-usd1-million-c-uas-research-grant/>

Tomorrow's squadron leaders will be accompanied by drones

The Economist Print edition | Science and technology Jul 5th 2018 WARTON *Welcome to the wingbot*



Taranis looks like something out of "Star Wars". It is about the size of a small jet fighter, but is shaped like a flying wing. It is an unmanned, stealthy combat drone. Like most military drones it can be operated, via a secure data link, by a pilot sitting in a control centre on the ground. *Taranis*, however, can also be let off its digital leash and allowed to think for

itself using **artificially intelligent automated systems**. Left to its own devices, *Taranis* can take off, find its way to a combat zone, select a target, attack said target with missiles and then find its way home and land. A ground pilot would be needed only to keep an eye on events and take control if there was a problem.

Removing the pilot, together with the systems required for a human being to fly a fighter aircraft and remain alive during the gut-wrenching maneuvers this involves, has many advantages—not least of them, cost. The current prototype is thought to have set BAE back by around £185m (\$244m). That is cheap for what is a one-off experimental prototype. The F-35, a ten-country effort led by Lockheed Martin, is reckoned to be the most expensive military weapons system in history. Some \$50bn was spent developing the aircraft, which cost around \$100m each.

At present, *Taranis* is not scheduled for production. It was built to explore what such a drone is capable of achieving. After a series of successful test flights in Australia (pictured above), BAE's



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engineers are ready to apply the lessons they have learned to their designs of combat aircraft that might take to the sky a decade or so hence. <https://www.economist.com/science-and-technology/2018/07/05/tomorrows-squadron-leaders-will-be-accompanied-by-drones>

11Jul18

Global UAV and InDro Robotics Conduct First Sanctioned UAV Mapping Missions over a Canadian City July 10, 2018 Mapping and Surveying



Global UAV Technologies Ltd., together with InDro Robotics Inc. have concluded the first UAV mapping mission over a major Canadian metropolitan city. The **first of its kind operation**, flown over the downtown core of Victoria, B.C. on June 14th, 2018, was completed for the City of Victoria's Emergency Management Division and conducted alongside members of

Transport Canada.

Two flights were completed covering an area of 1.5 square kilometers with approximately 1000 high-resolution drone-acquired images collected. The survey was completed in one day by a professional flight crew which included personnel from InDro Robotics, Global UAV Technologies Ltd., and High Eye Aerial Imaging Inc. The flight was conducted with a Sensefly eBee plus RTK/PPK UAV.

"Transport Canada's willingness to work with the team to ensure this mission, vital to emergency planning and preparedness, could be **flown in an efficient and safe manner** has provided not only a wealth of data for emergency response but also a new depth of knowledge for future operations in such environments." stated Phillip Reece, CEO of InDro Robotics. http://uasweekly.com/2018/07/10/global-uav-and-indro-robotics-conduct-first-sanctioned-uav-mapping-missions-over-a-canadian-city/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_10&utm_term=2018-07-10

GA-ASI SkyGuardian Takes Off from North Dakota on Trans-Atlantic Flight July 10, 2018 Military | News



Today at 12:48 p.m. CDT a Medium-altitude, Long-endurance Remotely Piloted Aircraft produced by General Atomics Aeronautical

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Systems, Inc. took off from Grand Forks, North Dakota, USA on the **first-ever** trans-Atlantic flight of a MALE RPA. GA-ASI's company-owned MQ-9B SkyGuardian is in flight, bound for Royal Air Force Fairford in Gloucestershire, UK, where it is scheduled to land at approximately 6:45 p.m. local time (GMT+1) on July 11th.

Over the past 10 years, the RAF has operated GA-ASI's MQ-9 Reapers[®] in various theatres of operation. The RAF is celebrating its 100-year anniversary and to commemorate the event GA-ASI is flying SkyGuardian to RAF Fairford, where the Royal International Air Tattoo airshow will be held July 13-15. SkyGuardian will be on static display during the show.

http://uasweekly.com/2018/07/10/general-atomics-aeronautical-systems-skyguardian-takes-off-from-north-dakota-on-trans-atlantic-flight/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_10&utm_term=2018-07-10

CU Boulder and Black Swift Technologies Announce UAS Based Atmospheric Research Service July 10, 2018 Events | News

University of Colorado Boulder Integrated Remote and In Situ Sensing [Initiative](#) and [Black Swift Technologies](#), an engineering firm based in Boulder, announced today the formation of a cost-based service program providing scientists and researchers access to an atmospheric research university and the developer of aerial platforms for atmospheric science missions. This approach provides researchers and scientists access to unmanned aircraft research equipment without acquisition costs or maintenance fees.



"By capitalizing on our strengths in aerospace engineering and earth sciences together with Black Swift Technologies unmanned aircraft systems, we can support a wide range of atmospheric science initiatives at a time when rapid technological advances keep many of these capabilities out of reach of typical researchers and scientists," states [Cory Dixon, Ph.D., IRISS Chief Technologist](#). http://uasweekly.com/2018/07/10/cu-boulder-and-black-swift-technologies-announce-new-drone-based-atmospheric-research-service/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_10&utm_term=2018-07-11



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BULGARIA'S FIRST NEW PLANE IN DECADES IS A FREAKISHLY STRONG DRONE RIC ADAMS TRANSPORTATION 07.10.18



While [autonomous drones](#) dropping a few pounds of snacks or medical supplies are generating plenty of buzz, two Bulgarian brothers see an opening in the long-haul business. Svilen and Konstantin Rangelov are the CEO and chief technology officer of Dronamics. They've spent the past four years developing an aircraft that can haul nearly **800 pounds of cargo up to 1,550 miles**.

The Rangelovs' solution is a cargo craft called Black Swan. The fixed-wing aircraft, which uses a gasoline engine and a single nose-mounted propeller, can be monitored via satellite, fly into and out of small unpaved air strips, and could operate at a **cost at least 50 percent lower** than conventional, human-piloted cargo aircraft. A quarter-scale prototype with a wingspan of 13 feet flew in trials at military and civilian airports in Bulgaria over several months last year.

"We can create an aircraft the size of a bush plane, and we can make it land at very short runways, significantly expanding the number of towns that we can connect."



Dronamics expects each of the final aircraft to cost less than \$100,000—far less than any conventional cargo aircraft. The brothers plan to aim their service at **emerging markets in Asia, Africa, and Latin America**. There, more **relaxed regulations** governing new aircraft systems could provide an opening in the logistics market. They expect to initiate customer trials with the full-scale prototype by the end of 2019. If the Black Swan takes off as planned, it will mark **the first airplane designed in Bulgaria in 70 years**. And if it can deliver the goods, it's unlikely to be the last. <https://www.wired.com/story/dronamics-bulgaria-cargo-drone/>

12Jul18

Alphabet's Drones and Internet Balloons Are Full Businesses Now Gerrit De Vynck July 11, 2018



[Alphabet Inc.](#) is releasing two experimental projects from its X lab, adding new independent businesses to its growing roster of non-advertising entities.



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[Wing](#), which is developing a **drone delivery system**, and [Loon](#), which uses balloons to **bring internet signals to remote parts of the world**, will graduate from the company's "moonshot" lab and become full-fledged businesses under its Other Bets unit.

A move out of the innovation lab suggests the two projects have become established enough to at least have a clear business plan and path to profit. Alphabet pours billions each year into Other Bets, which had an operating loss of \$3.6 billion in 2017.

"Loon and Wing are **two of X's best experiments**," Astro Teller, who heads X, said in a [video post](#). "Today, unlike when they started as X projects, Loon and Wing seem a long way from crazy." <https://www.bloomberg.com/news/articles/2018-07-11/alphabet-s-drones-and-internet-balloons-are-full-businesses-now>

House Subcommittee, UAS Stakeholders to Discuss Counter-Drone Issues [Betsy Lillian](#) July 10, 2018



On Wednesday, July 11, the U.S. House of Representatives' Committee on Transportation and Infrastructure's Subcommittee on Aviation is holding a roundtable discussion on emerging issues related to the domestic use of counter-drone systems.

The roundtable is chaired by U.S. Rep. Frank LoBiondo, R-N.J.

Roundtable participants include:

- Angela Stubblefield, deputy associate administrator for security and hazardous materials safety at the Federal Aviation Administration;
- Steven Mucklow, special assistant to the deputy assistant secretary of defense for homeland defense integration and defense support of civil authorities at the U.S. Department of Defense (DoD);
- David Silver, vice president of civil aviation at the Aerospace Industries Association;
- Lisa Ellman, co-executive director of the Commercial Drone Alliance
- Douglas Johnson, vice president for technology policy at the Consumer Technology Association.

The purpose of the event is to review issues relating to the domestic use of counter-unmanned aircraft system (c-UAS) technologies. Participants will discuss lessons learned since the passage of the National Defense Authorization Act of 2017, actions that can be taken by civil UAS



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operators to mitigate problems and ongoing efforts by the FAA and the DoD to minimize any impacts caused by c-UAS use on the National Airspace System.

"For the commercial drone industry to truly take off and benefit the American public, we need a systematic framework that enables the development of highways in the sky," says Lisa Ellman, co-executive director of the Commercial Drone Alliance. https://unmanned-aerial.com/house-subcommittee-uas-stakeholders-to-discuss-counter-drone-issues?utm_medium=email&utm_source=LNH+07-12-2018&utm_campaign=UAO+Latest+News+Headlines

U.S. Sec. Homeland Security Nielsen says "Time is Running Out" to Deal with Drones Miriam McNabbon: July 06, 2018



In an editorial published in the [Washington Post](#), U.S. Department of Homeland Security (DHS) Secretary Kirstjen Nielsen painted a bleak picture of **drone technology's "dark side"** and urged lawmakers to give the Department more powers to deal with rogue drones.

"Drone technology offers the potential to change our world – from enabling historic transformations in e-commerce to faster emergency response," writes Nielsen. "But the technology also has a dark side. It can be used to spy on us, to threaten our critical infrastructure, or to attack crowds and public places."

The piece is not a love letter to the drone industry. Nielsen introduces the idea of giving the DHS and the Justice Department the power to shoot down, disrupt, monitor and mitigate drones deemed threatening.

The drone industry isn't blind to the issues. As security fears mount, counter drone technology has been developing rapidly. <https://dronelife.com/2018/07/06/nielsen-says-time-is-running-out-to-deal-with-drones/>

13Jul18

Concept drone flies without propellers! July 12, 2018 Thomas Luna



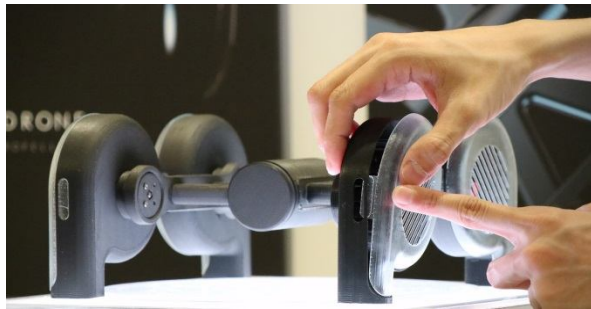
Marcus King, a graduate from London's Royal College of Art, designed a concept drone that can fly without propellers. King's UAV is equipped with impellers to produce thrust. King started the project to optimize safety for both the pilot and nearby people, but since it's still in its early



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stage, it requires more development before it can even be compared to the likes of modern [consumer quadcopters](#).

According to [Dezeen](#), the concept drone is designed to pull air from its sides and channel it through an impeller system. Once air is accelerated, it pushes it out to the bottom of the UAV, which creates an upward thrust.



Besides being safer to use, the concept drone was also described by Dezeen to fly quieter than quadcopters available today.

King also told Dezeen that it took 16 prototypes before he actually got one to fly.

If this drone can truly **increase safety and decrease noise**, then all it needs is a competitive price tag and a functional gimbal to compete in the consumer drone market. <https://www.wetalkuav.com/concept-drone-flies-without-propellers/>

UAVOS's Solar-Powered SAT-i Aircraft Completed Ten Hour Continuous Aerial Surveying

July 12, 2018 News



UAVOS Inc., a Mountain View-based company, has completed flight tests of the unmanned SAT-i aircraft powered by the Sun, designed to perform monitoring and aerial photography during daylight hours. The aircraft completed a **10-hour mission** for aerial photography of the surface relief, having a payload of a 600-gram

mirrorless camera.

SAT-i has a wingspan of 7.3 meters and weight of 6.2 kg. It is equipped with a Li-Ion battery that allows flying without solar energy for 2 hours with a payload up to 600 grams. The aircraft is hand-launched, the flight and landing are performed in fully autonomous mode. For UAV landing a flat level surface of 200 m long is suitable, with a touchdown accuracy of about 100 m. The landing trajectory calculations are carried out in an automatic mode taking into account current weather conditions. Low landing speed of 7 m/s allows keeping the aircraft intact after numerous landings.

Especially effective is the use of such UAVs for high-resolution orthomosaic imagery in large areas with a long flight time. For example, to successfully solve communication problems



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during long-distance monitoring missions of electrical power lines, UAVOS uses the Iridium data satellite transceiver module." http://uasweekly.com/2018/07/12/uavoss-solar-powered-sat-i-aircraft-completed-ten-hour-continuous-aerial-surveying/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_12&utm_term=2018-07-13

Elbit Systems Rolls-out Hermes 900 StarLiner, a New UAS Capable of Operating in Civilian Airspace July 12, 2018 News



Elbit Systems commences global marketing of the Hermes™ 900 StarLiner that features adverse weather capabilities and is fully compliant with NATO's Standardization Agreement 4671, qualifying it to be **safely integrated into civilian airspace**.

Concluding a year-long flying schedule, the aircraft has been performing Civil Aviation Authority certified flights in Masada National Park, Israel. A series of the Hermes 900 StarLiner is currently being assembled for the Swiss Armed Forces and is scheduled to be delivered and integrated into Switzerland NAS during 2019.

European countries are re-orienting defense efforts from involvement in far-away conflicts to coping with homeland and border security challenges. This shift has resulted in a growing demand for UAS that can be integrated into civilian airspace and perform complex homeland and border security missions.. http://uasweekly.com/2018/07/12/elbit-systems-rolls-out-hermes-900-starliner-a-new-uas-capable-of-operating-in-civilian-airspace/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_newsletter_2018_07_12&utm_term=2018-07-12