UAS and SmallSat Weekly News

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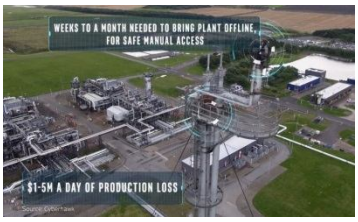
Intel and Cyberhawk use drones to inspect a Scottish gas terminal DEAN TAKAHASHI@DEANTAK NOVEMBER 16, 2017

Intel Falcon drone

Drones can make the world more efficient and safer, something Intel and Cyberhawk are demonstrating through a case study in which they used drones to inspect a gas terminal in St. Fergus, Scotland.

Intel and Cyberhawk used the Intel Falcon 8+ drone to inspect the facility, reducing risks for employees and saving an estimated $1 million to $5 million per day in potential production losses. Traditional inspections of this scale require facility shutdowns, which could keep the plant offline for days to weeks. Workers have to use harnesses and cables to hang in mid-air while manually collecting data on the structure.



Intel Falcon drone can inspect a facility like this in a day or two.

"In the last 20 years that I've worked in the inspection industry, drones are the biggest single change we've seen to date," said Chris Fleming, Cyberhawk CEO, in a statement.

Drones, or unmanned aerial vehicles (UAV), can be used to remotely inspect large and complex facilities while they're in operation, capturing accurate and precise data to better inform business decisions about asset maintenance.

"Flying in Scotland, the devices have to withstand strong winds," said Fleming. "The Intel Falcon is perfect for that because it has the highest wind tolerance and the best power-to-weight ratio of any platform on the market."

The Intel Falcon 8+ drone deployed for this mission captured 1,100 images, which translated to 12GB of data. It did so over the span of a couple of days. Normally, it would have taken three workers about three days to complete the inspection. https://venturebeat.com/2017/11/16/intel-and-cyberhawk-use-drones-to-inspect-a-scottish-gas-terminal/

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Drone program on the rise for Colorado Northwestern Community College Sasha Nelson November 17, 2017, Sasha Nelson snelson@CraigDailyPress.com

CNCC has plans to partner with Metro State University to expand its aviation program to include drones — Unmanned Aerial Systems and Unmanned Aerial Vehicles in late 2018 or early 2019.

"CNCC is very excited about this opportunity. We have a phenomenal aviation program that we house on the Rangely campus, and so this will be an opportunity for us to build that program out even further," said Janell Oberlander, vice president of the Craig campus and student affairs.

To help with the development of the program the college has applied for a $250,000 grant from the National Science Foundation. More than $100 billion could be spent on both military and civilian drones between 2016 and 2020, according to a report by Goldman Sachs.

All those drones will need drone pilots. "We feel that it is absolutely going to help our workforce and workforce development as well," Oberlander said.
http://www.craigdailypress.com/news/drone-program-rise-for-colorado-northwestern-community-college/

Drones are fighting wildfires in some very surprising ways Kate Baggaley / Nov.16.2017

From tiny quadcopters to big fixed-wing aircraft, drones are showing that they can detect, contain and even extinguish fires faster and with greater safety. They give firefighters a bird's-eye view of the terrain and help them determine where a fire will spread — so they can make swift decisions about where fire crews should go and which residents need to be evacuated.

Drones have key advantages over conventional aircraft. The airplanes and helicopters used to survey wildfires and drop retardant can't fly in poor conditions — and they're often in short supply. And flying over raging fires puts pilots and crew at risk.

Drones can be equipped with infrared cameras that peer through smoke, as well as sensors for wind direction and other weather variables that affect how wildfires spread. They can whiz through canyons and other cramped spaces where helicopters can't fly and glide low enough to capture high-resolution footage.

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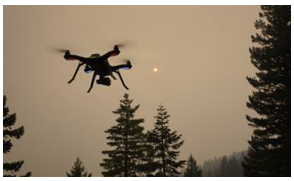

Drones can fly in conditions that helicopters and airplanes aren't equipped for. And if a fire starts to close in on a crew, drones can identify a quick escape route. "If we have a group of firefighters trapped we can easily send three or four drones up there," Runyan says.

These nimble aircraft have already begun to show their mettle. As fires raged across California last summer, dozens of helicopters were grounded. "The smoke was too thick for them to fly for days, sometimes weeks," says Brad Koeckeritz, chief of the Interior Department's unmanned aircraft systems division. "The drones provided an opportunity to gather intelligence at a time when we wouldn't be able to gather it any other way."
https://www.nbcnews.com/mach/science/drones-are-fighting-wildfires-some-very-surprising-ways-ncna820966

'Slaughterbots' Video Depicts a Dystopian Future of Autonomous Killer Drones

Glenn McDonald, Seeker | November 17, 2017 02:34pm ET

A graphic new video posits a very scary future in which swarms of killer microdrones are dispatched to kill political activists and US lawmakers. The makers of the seven-minute film titled *Slaughterbots* are hoping the startling dramatization will draw attention to what they view as a looming crisis — the development of lethal, autonomous weapons, select and fire on human targets without human guidance.

The Future of Life Institute, a nonprofit organization dedicated to mitigating existential risks posed by advanced technologies, including artificial intelligence, commissioned the film. Founded by a group of scientists and business leaders, the institute is backed by AI-skeptics Elon Musk and Stephen Hawking, among others.

The institute is also behind the Campaign to Stop Killer Robots, a coalition of NGOs, which have banded together to called for a preemptive ban on lethal autonomous weapons.

The timing of the video is deliberate. The film will be screened this week at the United Nations in Geneva during a meeting of the Convention on Certain Conventional Weapons. Established in 1980, the convention is a series of framework treaties that prohibits or restricts weapons considered to cause unnecessary or unjustifiable suffering. https://www.space.com/38820-

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slaughterbots-video-depicts-a-dystopian-future-of-autonomous-killer-drones.html?utm_source=sdc-newsletter&utm_medium=email&utm_campaign=20171117-sdc

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AT&T Deploys `Flying COW' Drone for Cell Service in Puerto Rico Daniel Flatley November 17, 2017

AT&T Inc. has deployed a drone to act as a "cell tower in the sky" to help provide communication services in hurricane-ravaged Puerto Rico, the first time the technology has been used to reconnect residents after a disaster, the company said.

The Federal Aviation Administration announced its approval Friday for the use of the vehicle, which resembles a small helicopter.

The "Flying COW," which stands for "Cell on Wings," hovers 200 feet above the ground to provide wireless service to people within a 40-mile area. It's connected to the ground with cables for power and telecommunication signals.

The FAA had to issue a special waiver to the company because routine commercial drone use is limited to devices weighing less than 55 pounds (25 kilograms). The approval was granted on Nov. 5, according to the agency.

Unlike the quad copters that are most common in civilian use, the Pulse Vapor 55 drone resembles a small helicopter, according to the FAA.
https://www.bloomberg.com/news/articles/2017-11-17/at-t-deploys-flying-cow-drone-for-cell-service-in-puerto-rico

Drone carrying drugs, phones crashes in prison yard USA TODAY NETWORKTerell Wilkins, The Arizona Republic Published Nov. 17, 2017

Officials with the Arizona Department of Corrections are investigating after a drone carrying drugs and cellphones crashed in a secure zone at Arizona State Prison Complex-Lewis in Buckeye on Sept. 24, 2017.

PHOENIX — An attempt to deliver a load of drugs and cellphones to inmates at an Arizona prison failed when the drone carrying the contraband crashed in a yard accessible only to corrections officers. It was the first known incident

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involving a drone at an Arizona state prison, according to corrections spokesman Andrew Wilder.

Wilder said correctional officers at the facility discovered the drone after it crashed and confiscated the contraband, which had been tied up in an orange sweatshirt. Inside were two cellphones and several freezer bags filled with marijuana, images show. The items were sent to the state crime lab for fingerprint and DNA analysis, but investigators have not been able to locate the origin of the drone, Wilder said.

Similar incidents have taken place at other correctional facilities across the country, including at federal correctional facilities in Louisiana and Texas.

In July 2015, a fight broke out at Mansfield Correctional Institution in Ohio when a drone dropped tobacco, marijuana and heroin to an inmate at the prison, sparking an altercation, according to a CNN report.

All airspace around prisons is federally restricted so flying any item, including drones, near the facilities is prohibited, Wilder said. Attempting to smuggle drugs and cellphones into prisons is a felony crime. https://www.usatoday.com/story/news/nation-now/2017/11/17/drone-carrying-contraband-crashes-prison-yard/873557001/

Virgin Orbit Lands DoD Contract to Demo Air Launch System

Joanna Crewson: November 17, 2017 In: News, Products & Service

Virgin Orbit, the small satellite launch venture spun out of commercial space company Virgin Galactic, has secured a contract to demonstrate its air-launched rocket technology through the Defense Department's *Space Test Program*, TechCrunch reported Thursday. The report said Long Beach, California-based Virgin Orbit expects the *LauncherOne* prototype flight to take place as early as January 2019.

LauncherOne is designed to launch small satellites into low-Earth orbit via carrier aircraft derived from the Boeing *747-400* platform.

Space News reported the mission was contracted through a partnership between DoD's Defense Innovation Unit Experimental and the U.S. Air Force using "other transaction authority." Virgin Orbit also established a subsidiary to offer mission management and engineering support services to government customers that aim to fly payload

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on LauncherOne. http://blog.executivebiz.com/2017/11/reports-virgin-orbit-lands-dod-contract-to-demo-air-launch-system/

Drone delivery service one step closer to reality in northern Ontario community

Robin De Angelis, CBC News Posted: Nov 20, 2017

Toronto-based company Drone Delivery Canada travelled to the James Bay Coast recently to run tests, for a partnership with Moose Cree First Nation.

The goal of the partnership is to establish a drone delivery service that would bring food, medical supplies and other necessities to the island of Moose Factory. The company said the drones will be able to travel up to 10 kilometres and carry up to 10 pounds.

Moose Factory is often isolated from the mainland during the spring and fall, when it's not safe to drive across the ice, but the water is still too icy for boats.

Tony Di Benedetto, the CEO of Drone Delivery Canada, said this technology will have a positive impact on similar isolated communities. "It's really about trying to service communities that lack infrastructure, where basic goods are very difficult to obtain, and when you can obtain them it is very, very expensive," he said. http://www.cbc.ca/news/canada/sudbury/drone-deliver-service-testing-1.4408126

Aeromodelling enthusiasts initiate online protest against regulations for drones proposed by the DGCA News-analysis PTI Nov, 19 2017

Aeromodelling enthusiasts have initiated an online signature campaign against the governments proposed rules on drones claiming it threatens to destroy recreational flying. Earlier this month, the Directorate General Civil Aviation (India) has released its draft rules making it mandatory for "unmanned aircraft system" to seek a unique identification number (UIN) as well as an operator permit.

Model aircraft weighing up to 2kg, and those operated by government security agencies are exempted from this requirement. In a petition on online platform Change.org, aeromodellers say that these rules will "render their hobby and sport impossible and unsustainable". In a separate petition to the DGCA, submitted as part of the consultation procedure before the rules are finalised, they have submitted that a separate category must be carved out for "model aeroplanes" as these don't pose any security concerns.

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Aeromodellers explain that as model aeroplanes are flown in the line of sight unlike drones, which can be pre- programmed and can be remotely controlled, they should not be considered a security threat. Hobbyists have also demanded that the weight limit of model planes exempt from registering for a UIN and a permit should be increased up to 25 kg from 2kg. "When a multi-copter is made it can be made for a weight less than 2 kgs but how can an aeroplane model made with a wooden structure and powered by a motor weigh so less? http://www.firstpost.com/tech/news-analysis/aeromodelling-enthusiasts-initiate-online-protest-against-regulations-for-drones-proposed-by-the-dgca-4217463.html

Drones To The Rescue JOE STUMPE|NOVEMBER 2017

Most new uses of drones in aviation are still in their experimental stages, with Canada and European countries ahead of the United States in that regard.

In Europe, two companies are touting drones for the inspection of commercial airliners, a job they can complete in a fraction of the time it takes humans to do. Today, speeding up inspections would reduce aircraft downtime and reduce expensive man-hours spent towing aircraft into hangars and pulling out scaffolding and cherry pickers to reach the upper parts of the plane. Drones can be programmed to fly around and photograph planes — using different flight paths for each make of plane — in about a fifth or less of the time it now takes.

A quadcopter with a half-meter wing span, RAPID has electro-optical sensors that detect damage from lightning strikes, hailstones and other hazards, while a lidar sensor helps guide it.

"The big win," Goudie says, is that skilled employees can spend more time analyzing data collected by the drones, instead of manually conducting the inspections themselves.

The drone's avionics keep it at least 1 meter away from the aircraft it's inspecting, to avoid damaging it, and feature a collision avoidance system to dodge people or objects that might come into its path. Operating inside a hangar is an advantage, since licenses aren't required to operate a drone in "private field environments" in most countries, Goudie says.

Aerium Analytics flies versions of a Robird drone at the Edmonton airport in Canada to repel birds that interfere with aircraft.

"The whole point of the system is it's not another drone, it's another tool for the aircraft industry," Goudie says.

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https://aerospaceamerica.aiaa.org/features/drones-to-the-rescue/

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Proposed NDAA to Reinstate FAA Drone Registration Rule Scott Nicholas November 20, 2017 Latest News, Tech & Cyber

The fiscal 2018 *National Defense Authorization Act* includes a provision that would restore Federal Aviation Administration rules on the registration of small, model-aircraft-sized drones, FCW reported Friday. FAA previously implemented an online registration requirement for commercial and recreational drone operators who use unmanned aircraft systems that weigh less than 55 pounds and more than 0.55 pounds in a move to control the increase of UAS usage within the national airspace.

The U.S. Court of Appeals for the D.C. Circuit nullified the agency's drone registration policy in May, saying the regulation violates the *FAA Modernization and Reform Act of 2012*. The 2018 NDAA awaits President Donald Trump's signature. http://www.executivegov.com/2017/11/report-proposed-ndaa-to-reinstate-faa-drone-registration-rule/

Bye Aerospace and SolAero Test Solar UAV Wing 20 Nov 2017 | Caroline Rees

SolAero Technologies has announced the successful completion of ground testing of the integrated solar wings on Bye Aerospace's medium-altitude, long-endurance solar-electric unmanned aerial vehicle (UAV) StratoAirNet. SolAero successfully integrated lightweight, flexible solar modules incorporating their state-of-the-art, high efficiency solar cell technology onto the wing structure while minimizing add-on mass and preserving the critical laminar flow surface of the wing.

StratoAirNet is a lightweight, carbon composite construction, aerodynamically efficient aircraft. The solar-electric UAV has a payload capacity of up to 70 lbs., enabling multiple sensors at altitudes of up to 35,000 feet. The initial StratoAirNet 15 prototype (with a 15-meter wing) can be optionally-piloted. With a test pilot in the prototype aircraft, solar, battery and propulsion system maturity, preliminary flight performance evaluation and autoflight control optimization are accomplished at a faster pace, with greatly reduced risk.
http://www.unmannedsystemstechnology.com/2017/11/bye-aerospace-solaero-technologies-successfully-test-solar-uav-wing/

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VolAero Drones Track Pythons With Thermal Cameras 15 Nov 2017 | Caroline Rees

VolAero Drones has demonstrated that drones equipped with state-of-the-art thermal imaging equipment can effectively spot and track pythons at night – their prime hunting time. Over 100,000 Burmese pythons infesting the Florida Everglades have decimated 90 percent of small wildlife while surviving all attempts at eradication.

"Python hunters finally have a tool to make hunting more efficient, bringing down the python numbers that are devastating Florida's Everglades," said Bill Booth, a Florida outdoorsman working with VolAero. "This drone and thermal technology is light-years ahead of shining a flashlight into the darkness and hoping for the best. The thermal imagery picked up not just the monster pythons, but also native snakes as small as 18 inches. This suggests that we'll be able to spot and eliminate clusters of python hatchlings, which will help curb their reproductive cycle." http://www.unmannedsystemstechnology.com/2017/11/volaero-drones-track-pythons-thermal-cameras/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=30ec936704-eBrief_2017_7_Nov_11_3_2017&utm_medium=email&utm_term=0_6fc3c01e8d-30ec936704-119747501

Florida Airport Installs Dual Bird-Drone Detection Radar System 15 Nov 2017 | Caroline Rees

Northwest Florida Beaches International Airport (ECP) has announced that, in partnership with DeTect, a provider of aviation security and safety solutions, it has completed the installation of a dual function birdstrike avoidance radar and a drone detection system called DroneWatcher DSR.

The DSR additionally functions as a bird radar providing risk alerts to airport managers. Drone incursion and birdstrike alerts are provided to airport users via web displays and automated text messaging.

"At ECP we are constantly striving to go above and beyond to ensure the safety and security of our passengers and staff" said Parker W. McClellan Jr., airport Executive Director. "Our partnership with DeTect offers the airport technology that will enhance safety measures, and

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we are proud to say we're the first to do it".
http://www.unmannedsystemstechnology.com/2017/11/florida-airport-installs-dual-bird-drone-detection-radar-system/

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LEWIS UNIVERSITY USES UAS TO DELIVER ACCEPTANCE LETTERS TO LOCAL HIGH SCHOOL STUDENTS AUVSI NEWS NOV 15, 2017

On Monday, Nov. 13, Romeoville, Illinois' Lewis University used a UAS from its unmanned aircraft systems program to deliver college admissions acceptance letters to eight students at Romeoville High School.

The delivery, which used a Spreading Wings S900 UAS, is believed to be the first of its kind in the United States.

As the case with all drone flights, this one required a special amount of preparation and attention to detail. Planning for this flight began at the Aviation Department level, as routes, safety and regulations all had to be evaluated.

Next, UAS students who are pursuing the major were approached to get their feedback, opinions and ideas on the flight. And last, but certainly not least, the UAS program went to the Village of Romeoville to get their help with logistics and planning for the flight.

Between taking all proper precautions — including hand-flying the route to maintain visual line of sight of the UAS and to mitigate any risks during the delivery — everything worked in the program's favor on the day of the flight, and the delivery of the acceptance letters went off without a hitch. http://www.auvsi.org/industry-news/lewis-university-uses-uas-deliver-acceptance-letters-local-high-school-students

Almost 1 million drones are registered with FAA; this ZIP code has the most

November 21, 2017, *The Associated Press*

LAS VEGAS (AP) —The Las Vegas Review-Journal reports drone researchers at Bard College in New York analyzed data from the Federal Aviation Administration, finding the 89117 ZIP code had 672 hobbyist drone registrations.

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The residential area west of the Las Vegas Strip had about 200 more hobbyist users than the next highest Zip code, which was in a Houston suburb. Researchers say there are 836,796 hobbyist drone users and 106,739 non-hobbyist users registered across the country as of last month. https://www.seattletimes.com/nation-world/analysis-las-vegas-zip-code-holds-the-most-drone-hobbyists/

FAA Seeks Comments on Drone Airworthiness Criteria S.L. Fuller | November 21, 2017

The FAA said FlightScan Corp. wants to certificate the Camcopter S-100, a helicopter-shaped unmanned aircraft system originally from Schiebel. The agency is now looking for public comments on proposed airworthiness criteria for the drone. This is a "first," according to the agency.

FlightScan applied June 1, 2015, for a special class type certification. The FAA is now asking for comments on proposed design standards for the drone to fly in controlled airspace. "The ultimate goal of this and other projects is to grant FAA airworthiness certification to fully functional, ready-to-operate unmanned aircraft," the FAA said. "The S-100 is the first unmanned aircraft to have its certification basis published."

Camcopter S-100 is powered by a liquid-cooled rotary engine and has a maxiumum takeoff weight of 440 pounds, according to the FAA. It is used mostly to inspect power lines. The aircraft would remain within radio line-of-sight of the control station.
http://www.aviationtoday.com/2017/11/21/faa-seeks-comments-drone-airworthiness-criteria/

FAA approves Flying Cow drones to restore Puerto Rico cell network Charlie Osborne for Between the Lines | November 20, 2017

The US Federal Aviation Administration (FAA) has approved the use of drones to act as mobile cell phone towers in the ravaged area of Puerto Rico.

Close to two months after the Caribbean island was struck by Hurricane Maria, buildings remain in tatters and there is still a lack of cellphone reception, electricity, and online access.

Without what we now often consider basic services in the West, residents have been left, in many accounts, stranded without a means to access help. This is where a squad of Flying Cows (Cell on Wings) may be able to assist. AT&T's Flying Cow is a "cell tower in the sky," according to

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the company, which has been designed to "beam LTE coverage from the sky to customers on the ground during disasters or big events."

The telecommunications giant says the drone carries a small cell and antennas and is connected to the ground by a tether which provides power and a fiber data connection. As the drone is powered via the ground it is able to remain in the sky indefinitely.
http://www.zdnet.com/article/faa-approves-drones-to-restore-puerto-rico-cell-reception/

Mosquito-Deploying Drones Could Combat Diseases MARCO MARGARITOFF NOVEMBER 21, 2017

Drones that deploy swarms of sterile mosquitos are being developed by WeRobotics, in order to curb the overall population of disease-ridden mosquitos. According to the *BBC*, sterile male mosquitos cannot reproduce with their female counterparts. Scientists hope to increase the reproduction rate of sterile males with infected females, thereby effectively elbowing infected mosquitos out of the general population.

We've reported on bio-inspired drones before, such as the RoboBee or the AquaMav drone, but this is conceptually different entirely. These drones won't be biomimetic, or used to infiltrate flocks of birds by appearing to belong. These mosquito-deploying drones are being designed to reach rural areas removed from traditional infrastructure such as roads. Their mission would simply be to deploy and depart. http://www.thedrive.com/aerial/16300/mosquito-deploying-drones-could-combat-diseases

Drone spits fire to clear rubbish on high-tension power line Zhang Xu China 2017-11-21

A drone spits fire to clear hanging rubbish on a high-tension power line in Haikou, Hainan Province, on Nov 16, 2017.

http://chinaplus.cri.cn/photo/china/18/20171121/54591.html

'Slaughterbot' film warns tiny drones could carry out murders MARK BLUNDEN Technology Reporter The Evening Standard **Another view**

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Swarms of tiny drones flown by artificial intelligence and programmed to assassinate human targets using a few grams of explosives have been forecast by a British academic in a dystopian short film.

Unmanned aerial vehicles called Slaughterbots are the subject of a collaboration between AI expert Professor Stuart Russell and the Future of Life Institute, an AI watchdog supported by Elon Musk and Stephen Hawking. The seven-minute video starts with an Apple-style keynote presentation and shows palm-sized UAVs carrying facial recognition technology and explosives to commit untraceable civilian massacres. The film shows the weapons targeting politicians and tracking people by their social media posts. https://www.standard.co.uk/news/techandgadgets/slaughterbot-film-warns-tiny-drones-could-carry-out-murders-a3695891.html

The AquaMAV Drone Seamlessly Traverses Sea and Sky BY MARCO MARGARITOFF NOVEMBER 20, 2017

This bio-inspired UAV, designed to collect water samples, can dive into bodies of water by folding its wings and shoot back out using a gas jet.

The Aquatic Micro Air Vehicle (AquaMAV) developed by Mirko Kovac, Ph.D., of the Aerial Robotics Lab at Imperial College London, is a bio-mimetic drone similar to the RoboBee we recently reported on. While both of these unmanned aerial vehicles were inspired by the capabilities of animals and can navigate multiple environments, the AquaMAV was designed specifically to collect water samples. According to *ZDNet*, the drone can reach speeds up to 25 mph, traverse more than six miles on one charge, and dive in and out of the water. While submerged, the AquaMAV collects water samples and launches back into the open skies using an embedded gas jet.
http://www.thedrive.com/aerial/16266/the-aquamav-drone-seamlessly-traverses-sea-and-sky

NanoRacks Completes 13th CubeSat Deployment Mission from Space Station, First "Doublewide" Satellites Houston, TX, November 21, 2017

Early this morning, NanoRacks successfully completed the Company's 13th CubeSat deployment mission from the International Space Station. As these five CubeSats enter low-Earth orbit, this brings NanoRacks to 176 total CubeSats deployed into space via the NanoRacks CubeSat Deployer (NRCSD). In total, the Company has deployed 193

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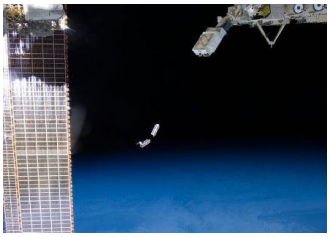
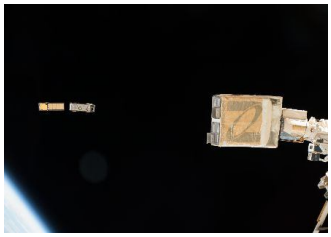
satellites into space. This mission marks the first deployment of the industry standard 6U CubeSats in the 2U x 3U form factor from the NanoRacks 'Doublewide' Deployers.


The NanoRacks CubeSat Deployer (NRCSD) is a self-contained system that mechanically and electrically isolates CubeSats from the ISS, cargo resupply vehicles, and ISS crew. Each NRCSD is capable of holding six CubeSat Units – allowing it to launch 1U, 2U, 3U, 4U, 5U, and 6U (2×3 and 1×6) CubeSats. http://nanoracks.com/products/iss-cubesat-deployment/ http://nanoracks.com/13-cubesat-deployment-doublewide/

23-24Nov17

Drone degree looking to take Las Vegas students to new heights Bryan Callahan Nov 21, 2017

LAS VEGAS (KTNV) The Engineering Technology Program of the College of Southern Nevada is launching a new degree in the fall of 2018 called Unmanned Aviation Systems Technology.

Professor Art Eggers is one of the leaders spearheading the program that most will call a drone degree. The program quickly became more than that as those tasked with designing the course load realized that companies in the drone industry were eager to get their hands on potential employees with knowledge of the programming and inner workings. Eggers is making it clear the degree is not all about flying the aircraft, even though it will be part of the courses. "The first thing you are going to do is [indicates a crash]. Then we are going to go back in the classroom over there and we are going to repair it and you are going to see what broke," Eggers said.

One of the CSN students helping Eggers fine tune the program is James Spear, a veteran who is currently working as a drone instructor among his many jobs. Being in the industry, he knows how many jobs there are coming down the pipeline, and he plans to share that with his fellow

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students. "The design side is where the money will be made," Spear said.
http://www.ktnv.com/news/students-ready-to-take-off-in-new-drone-degree-program

Israeli Firm Percepto Launches the Sparrow, an Autonomous Drone for Industry

Frank Schroth on: November 21, 2017

Percepto, developers of on-site autonomous drone systems, has announced the launch of its Sparrow I, an autonomous drone specifically designed for industrial environments. The Sparrow I can conduct multiple missions and can operate around the clock, reducing both security and operational costs, including the need for on-site pilots and operators.

Sparrow I uses multiple advanced technologies, such as machine vision and AI, to conduct security, safety and inspection missions, collecting and analyzing data in real-time. Highly accurate and actionable information is then provided to customers enabling them to protect sensitive and strategic assets, such as oil and gas refineries, power plants, shipping ports and sea terminals.

"Sparrow I was designed specifically to operate in harsh industrial environments, a rarity in today's drone landscape," said Dor Abuhasira, CEO and co-Founder of Percepto. "Our goal was to make Sparrow I as useful as possible for our customers, providing them with an easy way to increase efficiency, minimize unexpected downtime and reduce risks to personnel. To achieve this goal, we developed Sparrow I to include permanent mounted sensors and a rechargeable battery, removing the need for any human intervention."
https://dronelife.com/2017/11/21/israeli-firm-percepto-launches-sparrow-autonomous-drone-industry/

FAA Explains the LAANC Program Miriam McNabbon: November 17, 2017

The FAA has published an explanation of LAANC – the prototype system that the agency is evaluating for instant airspace authorizations.

The LAANC system "will ultimately provide near real-time processing of airspace authorization requests for unmanned aircraft (UAS) operators nationwide," says the FAA. "The system is designed to automatically approve most requests to operate in specific areas of airspace below designated altitudes."

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Designed to remove a major problem for both FAA and drone operators, the launch of the system has been eagerly awaited. FAA petitioned the Office of Management and Budget earlier this fall to expedite implementation of the prototype system forward, due to the strain that both operators and the agency experience in trying to process the high volume of authorization applications.

"LAANC uses airspace data provided through the UAS facility maps. The maps show the maximum altitude around airports where the FAA may authorize operations under Part 107. LAANC gives drone operators the ability to interact with the maps and provide automatic notification and authorization requests to the FAA."

Not only could the system eliminate the authorization bottleneck, but FAA says that it demonstrates progress on drone integration. "LAANC is the first UAS tool that delivers drone information to air traffic control and is the first step in developing Unmanned Aircraft Systems Traffic Management System (UTM)," says the agency. https://dronelife.com/2017/11/17/faa-explains-laanc-program/

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