UAS and SmallSat Weekly News

Contents

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22Jun19

Drones deployed in Djibouti for flood damage mitigation and port inspection BUSINESS DRONES AT WORK INTERNATIONAL NEWS ALEX DOUGLAS JUNE 20, 2019

Terra Drone Europe has completed a photogrammetric pavement assessment using a multirotor drone at Djibouti's port of Doraleh. Across five days, the aerial survey was accompanied by inspections of the quay walls and the sea defence revetments at the Doraleh harbor. The data acquired will be used in conjunction with previously-collected bathymetric data to offer a holistic view of the condition of the port from both above and below the waterline. The topographic data will be used to plan and propose a new drainage scheme to the port owners.

The project was commissioned to Terra Drone Europe by engineering consultancy firm Royal Haskoning, which has been employed by the Djibouti Main Ports to provide a condition report of the multi-purpose Doraleh port. The construction of the port was completed 3 years ago, and since then, there have been noticeable changes in the condition of some of the assets.

The report, generated using aerial survey data, will be handed over to the contractor responsible for the port construction as part of the 'defect notification' activities.
https://www.commercialdroneprofessional.com/drones-deployed-in-djibouti-for-flood-damage-mitigation-and-port-inspection%ef%bb%bf/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-305351-Commercial+Drone+Professional+DNA+-+2019-06-22

Danish drone test centre attracts European UAV firms APPLICATION BUSINESS EUROPE HEADLINE NEWS UKy ALEX DOUGLAS JUNE 18, 2019

Next week, A-techSyn, together with UK-based collaboration partners Cobham and Inmarsat, will travel to the test centre. They are expected to use the new facility to perform a BVLOS flight and showcase their technology at the annual International Drone Show.

One of the few drone test centers in Europe, the UAS Denmark test center is located at HCA Airport in Odense, Denmark. It offers 867 square km of drone airspace and is one of the few in the world that offers BVLOS flights in urban, rural and coastal areas. Teit Silberling, business manager at UAS Denmark, said: "We're experiencing an unprecedented demand from

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companies worldwide to access the test facilities – interest from global players has never been higher." https://www.commercialdroneprofessional.com/danish-drone-test-centre-attracts-european-uav-firms%ef%bb%bf/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-305351-Commercial+Drone+Professional+DNA+-+2019-06-22

UAH to test drones for earthquake first respondents University of Alabama in Huntsville June 19, 2019

The University of Alabama in Huntsville is the only academic institution selected to be a contractor in an experiment designed to improve first responder communications and on-site information during a major disaster.

UAH's Rotorcraft Systems Engineering and Simulation Center has the contract to evaluate Unmanned Aircraft Systems on Aug. 19 through August 23 during the Next Generation First Responder-Birmingham Shaken Fury Operational Experiment.

Commonly referred to as Shaken Fury, the effort is a U.S. Department of Homeland Security Science and Technology Directorate operational experiment to evaluate emerging communications technologies in disaster situations.

Birmingham is the last of a five-year series of Federal Emergency Management Agency Shaken Fury experiments. It will evaluate selected DHS-developed and commercial technologies to see how they integrate with existing public safety systems using open standards and how those integrated capabilities enhance operational communications, increase operational coordination, improve responder safety and augment situational awareness.
http://www.uasmagazine.com/articles/2042/uah-to-test-drones-for-earthquake-first-respondents

Wounded Eagle UAS Trains Disabled Veterans on Drone Mapping Betsy Lillian June 19, 2019

With the help of student unmanned aircraft system operators, Wounded Eagle UAS Inc. (WE) recently completed aerial mapping of the 388-acre West Los Angeles Veterans Affairs Medical Center, run by the VA Greater Los Angeles Healthcare System.

In cooperation with the VAGLAHS Emergency Management Office, WE created high-resolution imagery of the entire campus for historical purposes. Using a UAS and drone mapping software, WE captured thousands of images of WLA

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and stitched them together to make a three-zone orthomosaic map. WE also created 3D renderings of several local historical buildings, including the Wadsworth Chapel and Brentwood Theater. WE is a veteran-run nonprofit that trains disabled veterans to become commercial drone operators.

Joseph Dorando, a Part 107-certified remote pilot, was the team lead for the project. WE students assisted Dorando and learned how to make their own maps. https://unmanned-aerial.com/wounded-eagle-uas-trains-disabled-veterans-on-uas-mapping?utm_medium=email&utm_source=LNH+06-20-2019&utm_campaign=UAO+Latest+News+Headlines

AUVSI Testifies on UAS Security Priorities Betsy Lillian June 19, 2019

At a hearing on Tuesday by the U.S. Senate Commerce, Science and Transportation Committee Subcommittee on Security, Brian Wynne, president and CEO of the Association for Unmanned Vehicle Systems International, called for accelerated federal rulemakings and the development of holistic policy solutions for unmanned aircraft systems.

He emphasized the importance of approaching UAS security from an overall airspace management perspective, rather than focusing only on how to interdict an errant drone. Wynne outlined three necessary conditions for UAS security: a holistic framework for detecting, tracking, identifying and mitigating UAS; securing UAS command-and control-connections and the data UAS collect; and well-defined procedures for how to respond to potential security threats.

“Careless and clueless operators can pose safety risks and paint responsible, legal UAS operations in a negative light, while criminal behavior can jeopardize the security of our airspace,” Wynne said. “As the number of UAS in our nation’s airspace continues to grow, it is vital our regulatory framework around UAS evolve to address these potential security challenges and ensure technologies are put in place to detect, identify and mitigate UAS which may pose a threat.”

Wynne underscored the importance of accelerating the federal rulemaking for remote ID, a critical component for the future of detection, tracking and identification technologies, he said. The rulemaking for remote ID has been delayed twice, with a notice of proposed rulemaking now expected in September. https://unmanned-aerial.com/auvsi-testifies-on-uas-security-priorities?utm_medium=email&utm_source=LNH+06-20-2019&utm_campaign=UAO+Latest+News+Headlines

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WeRobotics Launches $235,000 Challenge to Solve Social Issues through Drone Data June 19, 2019 News

WeRobotics, an organization focused on accelerating the positive impact of robotics solutions through local expertise, today launched the Unusual Solvers Competition to advance the "drones for good" movement globally. The competition, now accepting submissions through August 31, 2019, will award $235,000to innovators using drones and data to address pressing local challenges in humanitarian aid, public health, land rights, conservation, agriculture, resilient urban planning, and more.

While drones are now more accessible than ever, communities around the world still struggle to translate drone data into effective solutions that drive action and impact. Data analysis can be time consuming, costly, and complex — and often does not account for local and cultural nuances. Additionally, the proliferation of drones has led to a number of ethical challenges with privacy and data protection, further hindering the potential for drones to improve lives.

Through the Unusual Solvers Competition, WeRobotics aims to spark original, scalable solutions to address these issues. In particular, the competition encourages solutions from areas that typically receive lower investment and have higher barriers to entry — Latin America, Africa, Asia, and Oceania. Applicants do not need to be technical drone experts nor own a drone. However, they must understand the challenge they want to tackle and possess deep knowledge of the communities they intend to serve.
https://uasweekly.com/2019/06/19/werobotics-launches-235000-challenge-to-solve-social-issues-through-drone-data/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_06_20_2019&utm_term=2019-06-23

24Jun19

The Air Force has a new drone-killing microwave weapon named 'Thor' Kevin Robinson-Avila, Albuquerque Journal June 21, 2019

Video: https://youtu.be/Ogi_o8dszrk

U.S. military bases across the globe may soon have a New Mexico-made, high-powered microwave weapon at their disposal to instantaneously down swarms of enemy drones.

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The Air Force Research Laboratory at Kirtland Air Force Base unveiled the weapon Thursday morning in a live demonstration with local reporters, who watched the system effortlessly knock a hovering drone out of the sky with an invisible and inaudible electromagnetic wave.

The $15 million system, called the Tactical High Power Microwave Operational Responder, or THOR, disabled the unmanned aerial vehicle in a flash, sending it spiraling to the ground the moment the electromagnetic ray hit it. Had more drones been flying within THOR's expansive scope, they also would have dropped in an instant, THOR program manager Amber Anderson said.

The AFRL built the machine on an expedited, 18-month timeline to get it into war fighters' hands as fast as possible, given the increasing military threat from drones, said Kelly Hammett, head of AFRL's Directed Energy Directorate in Albuquerque. The system is aimed at protecting military bases from multiple-drone attacks, which the Air Force has identified as its No. 1 priority for emerging "directed energy," or microwave and laser, defense systems.
https://taskandpurpose.com/air-force-thor-microwave-weapon

Europe Pushes for Commercial Drone Expansion, Possibly Using AI *Andy Pasztor* June 21, 2019

LE BOURGET, France—Europe's aviation industry and regulators are eager to significantly expand commercial drone operations in coming years, including harnessing artificial intelligence for air-traffic control.

The trend was evident during the Paris Air Show here this week, with several companies disclosing ideas for opening up additional airspace for unmanned aircraft.

French electronics and aerospace company Thales SA is exploring using artificial intelligence tools to eventually separate and keep track of unmanned aircraft at low altitudes. Existing radars and human traffic controllers simply won't be able to handle the crush of data, Mr. Cresswell said, and only artificial intelligence applications are likely to have the capacity to react quickly enough to maintain a safe buffer around individual drones.

Mr. Cresswell also said that Thales projects 2020 will be the first year commercial drone sales will exceed military sales world-wide. "You've got the civilian market growing between 10% and 15% per year," he said, with those flights concentrated for the foreseeable future in a narrow band of airspace no more than 1,000 feet in altitude. Rapidly increasing roles for drones—from agriculture to construction to industrial uses—"are driving this market at a furious pace,"

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according to Mr. Cresswell. https://www.wsj.com/articles/europe-pushes-for-commercial-drone-expansion-possibly-using-ai-11561110116

The Drone Industry Barometer 2019 20 Jun 2019 Mike Rees

Following last year's popular Drone Barometer Survey, DRONEII and HINTE Marketing have created a subsequent free whitepaper titled Drone Industry Barometer 2.0. This whitepaper highlights a variety of challenges that the drone industry continues to face, as well as the changes in perspectives compared to 2018. These range from complicated and constantly changing drone regulations, to market growing pains.

The key difference between this year's Barometer, and last year's is instead of focusing purely on Europe, this year's barometer addressed the global drone industry. Having gathered data from over 500 respondents from 74 countries, it gives a broader and more thorough barometer results than ever before.
Besides a changing geographical nature of the respondents, their focus within the industry is also different.

"The Drone Industry Barometer is one of our most valuable tools to date. Getting to hear industry perspectives on such a high level across the board gives us the most comprehensive understanding of the drone market today."
Kay Wackwitz, CEO and Founder of DRONEII. Download the whitepaper here: https://bit.ly/2ReyzTx https://www.unmannedsystemstechnology.com/2019/06/the-drone-industry-barometer-2019/

State and US government will fund large-UAS research at Houma airport June 20, 2019 Philip Butterworth-Hayes UAS traffic management news

Louisiana Governor John Bel Edwards joined Assistant Secretary John Fleming of the U.S. Economic Development Administration, Terrebonne Parish President Gordon Dove and Houma-Terrebonne Airport officials to announce a $1.35 million airport infrastructure grant from the EDA.

"The grant will fund taxiway, access road, ramp and utility improvements for an undeveloped 10-acre parcel at the airport, which will establish a Gulf of Mexico Center of Excellence for Large-Unmanned Aircraft Systems, or L-UAS. Gov. Edwards

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signed an executive order at the event designating the airport as Louisiana's L-UAS site with the Federal Aviation Administration. Future improvements will include a new 40,000-square-foot hangar that will house automated navigation systems for unmanned aircraft flying the Gulf of Mexico for oil and gas, hurricane reconnaissance, coastal protection, homeland security, research and military missions."

Along with other utilities and infrastructure work, the grant will fund the installation of high-performance data lines connected to the Louisiana Optical Network Initiative for supercomputing applications. Unmanned helicopters and unmanned fixed-wing aircraft will be monitored and controlled from the new 40,000-square-foot hangar, which will be equipped with artificial intelligence systems. https://www.unmannedairspace.info/latest-news-and-information/state-and-government-will-fund-large-uas-research-at-houma-airport/

Drones used to inspect troubled bridges in South Carolina Haye Kesteloo Jun. 24th 2019

Drones are being used to inspect troubled bridges in South Carolina by researchers at Clemson University and the University of South Carolina. The research team is using drones and robots to assess the bridges both below and above the water.

The Department of Transportation is funding the drone research project which is expected to be completed by the summer of 2020. Using drones to do the inspection work on the bridges is believed to save SC money. Michigan's DoT said it would save about seven hours on an average bridge inspection or $3,400.

The drones used during the SC bridges inspections have six rotors on carbon arms and include two flotation devices.

Also as you can see in the photo, the drones are flown manually. Last year during DJI's AirWorks 2018, drone company Automodality showed how their drones are able to autonomously inspect bridges. You can see their presentation in the video below. https://dronedj.com/2019/06/24/drones-used-to-inspect-troubled-bridges/#more-17084

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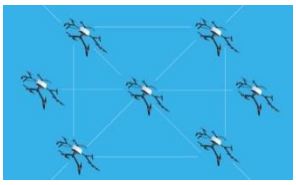
Chinese researchers are developing an airborne quantum communications network with drones as nodes Charles Q. Choi



Scientists in China and Europe are currently developing satellite-based quantum networks, enabling long-distance satellite-to-ground links.

Scientists at Nanjing University in China, noting the recent explosive advances in drone technology, have designed a "quantum drone" to serve as an airborne node in a quantum network. The researchers developed an eight-rotor octocopter whose 35-kilogram weight at takeoff includes its onboard quantum communication system. In experiments, the researchers demonstrated that their quantum drone can operate while hovering in midair for 40 minutes at a time. It is capable of maintaining two air-to-ground links, each roughly 100 meters long and can receive and transmit entangled photons during the daytime, on a clear night, and even on a rainy night.

The scientists are confident that they can scale down their quantum communication system to fit aboard small consumer drones for on-demand local-area quantum networks. They could also scale it up for loading onto high-altitude drones that would be nodes in wide-area networks spanning hundreds of kilometers. All in all, they envision quantum drone networks filling a key niche between satellite and ground-based quantum networks. https://spectrum.ieee.org/tech-talk/computing/networks/quantum-drone

25Jun19

Drone at work: Utility using machines to build power lines DAVE KOLPACK June 12, 2019

FARGO, N.D. (AP) — A Minnesota utility that that paved the way by using drones to inspect transmission lines is now using them to build one.

A machine owned and operated by North Dakota-based SkySkopes installed wires Wednesday on six power poles that are part of a 5-mile Xcel Energy line in the Fargo area. Xcel and SkySkopes officials say drones will save time and money while increasing safety and reducing the environmental impact from heavy equipment that can tear up land.

Stringing the lines involves a multi-step process where the drone pulls a specialized rope through a pulley that is then attached to wires that will

transmit electricity. It took about 20 minutes for pilot Erik Nelson to perform the task on Wednesday, despite windy conditions that shook the lines and the pulleys.

“We’re probably not as fast as a helicopter, but we’re saving money and improving safety.” Vinger said. “You’re taking the pilot out of the equation. A drone is replaceable. A life is not.”
https://www.apnews.com/13cfc155bbac4947a37c560ebe6ae454

Singapore probes drones at airport that disrupted 63 flights ANNABELLE LIANG ASSOCIATED PRESS SINGAPORE Jun 25, 2019

Drones buzzing around Singapore's Changi Airport have caused 63 flights to be delayed or diverted in the past week, triggering an investigation and raising questions about the motives of the offenders.

The Civil Aviation Authority of Singapore said Tuesday that 18 flights at the airport were delayed and seven were diverted the night before "due to bad weather and unauthorized drone activities." It had earlier confirmed drones were seen flying near the airport last Tuesday and Wednesday. That caused the intermittent closure of a runway, delaying 37 flights and diverting one arriving plane to Kuala Lumpur, Malaysia.

"A multi-agency team including the Civil Aviation Authority of Singapore, Changi Airport Group, Singapore Armed Forces and the Singapore Police Force was activated for the search and locate operations," the regulator added. Investigations are ongoing. No details on the number of drones involved and the perpetrators have been provided by the authorities.
https://abcnews.go.com/International/wireStory/singapore-probes-drones-airport-disrupted-63-flights-63924797

Amazon granted patent for 'surveillance as a service' tech Jason Plautz June 24, 2019

Dive Brief:

- Amazon has received a patent for drone technology that would perform what the company calls "surveillance as a service," the latest in a series of steps the company has taken to develop security and surveillance tools.
- The patent, which was filed in June 2015 and granted earlier this month, is for an unmanned aerial vehicle that "may perform a surveillance action at a property of an authorized party." The patent covers still images, video, infrared imaging, thermal scanning, night-vision sensors and audio.

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- According to the patent, homeowners could request one-time or regular surveillance of their property, with alerts for suspicious activity. The drones would monitor a geofenced area, and all data captured outside that area would be obscured.

https://www.smartcitiesdive.com/news/amazon-granted-patent-for-surveillance-as-a-service-tech/557413/

Kespry posts results of first mining and aggregates customer survey INSIGHT RESEARCH PATRICK CREMONA JUNE 25, 2019

The drone-based aerial intelligence solution provider surveyed 220 North America-based mining and aggregates companies that use its platform for inventory management, mine planning, materials management, contractor benchmarking, and boosting employee safety across 3,311 worksites.

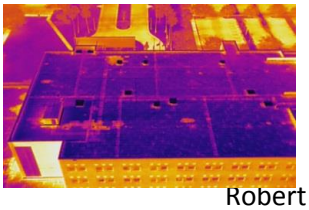
Amongst the survey's results was that a fifth of the companies surveyed said they were saving $50,000 – $100,000 a year using Kespry, with a further 24% in the $30,000-$49,999 bracket. There was also evidence that firms are saving a significant number of employee hours by using the platform, with 15% claiming to save between 600 and 2,400 hours and 27% saying the figure was between 120 and 240 hours.

Other results from the survey: 78% said they were more frequently able to survey their sites on demand; 65% achieved greater data accuracy while reducing discrepancies and rework; and 55% stated they have achieved safer operations as a result of using the company's technology.

Firms were also asked what led them to adopt Kespry, with 82% saying the platform's ease of use played a role, 79% praising the speed of data capture and turnaround and 64% choosing the system for its turnkey hardware guarantee designed to maximize uptime.
https://www.commercialdroneprofessional.com/kespry-posts-results-of-first-mining-and-aggregates-customer-survey/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-305573-Commercial+Drone+Professional+DNA+-+2019-06-25

More drones used by roof inspectors for 'faster and more efficient' inspections

DRONES AT WORK RESEARCH PATRICK CREMONA JUNE 25, 2019



The study, carried out by FLIR Systems, says that drones equipped with thermal and visible cameras are being used to track down moisture and inspect for signs of insulation that is damaged or missing. Although

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inspectors may still be required to get up on the roof to establish the extent of an issue, the drones are able to give a thorough view of a roof and establish which parts will not need further inspection.

Specialized courses in drone thermography and roof inspection are offered at the Infrared Training Center which allow operators to fully understand how to use the technology.

The report, written by FLIR's John Anderson, concludes: "While drones can face regulatory challenges concerning where and when they can fly, the combination of drones with thermal and visual cameras is a must-have for roof inspectors who want to stay ahead of the curve. https://www.commercialdroneprofessional.com/more-drones-used-by-roof-inspectors-for-faster-and-more-efficient-inspections/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-305573-Commercial+Drone+Professional+DNA+-+2019-06-25

Drone-Based Forest Fire Detection System Tested in Spain 24 Jun 2019 Mike Rees

Telefónica, in collaboration with the Carlos III University of Madrid, Divisek and Dronitec, has announced that it has carried out a drone-based pilot scheme for the early detection of forest fires, based on Internet of Things (IoT) solutions. Contributing to the prevention of fires is highly important for Spain, as they are one of the greatest ecological threats in the country.

Vicente Muñoz, Chief IoT Officer of Telefónica, pointed out: "Thanks to IoT technology, fires can be detected early so that it does not lead to a large devastating one."

The project takes advantage of the telecommunications towers that Telefónica has throughout the territory. The towers are equipped with thermal sensors, which are capable of detecting outbreak of fire in a perimeter of up to 15 km. Within these towers, there is a hangar with a drone, equipped with sensors including thermal and optical cameras. Once the thermal sensors detect a fire, they send an alert to the drone with the exact location where a fire may have started. The drone then flies autonomously to that point, even in conditions of low visibility. It collects optical and thermal images and sends the information it collects to the emergency services thanks to the mobile connectivity provided by Telefónica towers.

The system also allows the emergency control center to take control of the drone at any time to gather more information and track the fire environment. Once the mission is over, the drone returns to the hangar and gets ready for future flights, automatically recharging its batteries. Knowing what is going on allows the emergency services to make better decisions such as what

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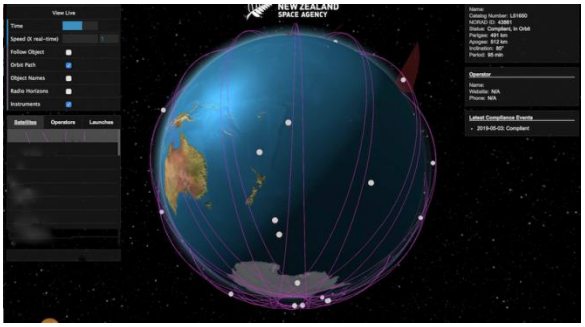
resources to send and how best to extinguish the fire.
https://www.unmannedsystemstechnology.com/2019/06/drone-based-forest-fire-detection-system-tested-in-spain/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=f04e12b1c4-eBrief_2019_Jun_25&utm_medium=email&utm_term=0_6fc3c01e8d-f04e12b1c4-119747501

26Jun19

LeoLabs and New Zealand announce tool to monitor low Earth orbit activity



Debra Werner June 25, 2019

SAN FRANCISCO – LeoLabs, a space situational awareness startup, has created a tool to help the New Zealand Space Agency continuously monitor satellites in low Earth orbit. The cloud-based Space Regulatory and Sustainability Platform relies on information from LeoLabs' network of phased-array radars. The mapping and software platform then analyses the data to ensure satellites launched from New Zealand are complying with licensing rules.

Companies and government agencies plan to send constellations of dozens, hundreds or thousands of satellites into low Earth orbit in the next few years, prompting concerns the heavy traffic could lead to satellites colliding with one another and create debris clouds.

Through the Space Regulatory and Sustainability Platform, NZSA can track the position, heading and orbit of individual satellites, view historical orbit records, obtain reports on changes in a satellite's orbit and receive alerts when a satellite is not complying with its licensing agreement.

The New Zealand Space Regulatory and Sustainability platform is the first of its kind, Mike Nicolls, LeoLabs co-founder and chief technology officer, said by email. "However, every space agency and regulatory body engaged in [low Earth orbit] will require similar capabilities to perform their own oversight function, and LeoLabs intends to work to create a standard offering for all of these agencies." https://spacenews.com/leolabs-and-new-zealand-announce-tool-to-monitor-low-earth-orbit-activity/

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Watch 3 'BIRDS' Take Flight from the International Space Station Passant Rabie Spaceflight

Three small cubesats were released into low Earth orbit last week as part of a program that helps countries build their first satellites. For this mission, called BIRDS-3, the Japanese Small Satellite Orbital Deployer ejected the tiny satellites outside the Kibo module of the International Space Station using a robotic arm on June 17. The batch of cubesats included Nepal's first satellite, NepaliSat-1 and Sri Lanka's first satellite, Raavana-1. The third cubesat, Uguisu, is from Japan.

The cubesats will send short, ciphered messages on their radio-frequency band as well as collect data, such as monitoring water levels in flood-prone areas and conducting measurements of Earth's magnetic field, according to The International Amateur Radio Union.

The mission is the first of its kind to deploy small satellites from an orbiting space station, according to a statement from NASA. https://www.space.com/space-station-deploys-birds-3-cubesats-video.html

NYPD deploys new technology to keep drones away from Gay Pride Parade

ROCCO PARASCANDOLA NEW YORK DAILY NEWS JUN 25, 2019

The NYPD vowed on Tuesday to keep this weekend's massive Gay Pride Parade free of terror, harassment - and drones. Police have purchased anti-drone technology and will have sensors positioned along the parade route and around the closing ceremony in Times Square, according to NYPD Chief of Counterterrorism James Waters.

"The sensors will identify to us, will alert us to, a drone flying in the air," Waters said. "And then we'll identify the user and interdict." That likely means finding the drone operator as quickly as possible. While technology allows the military and intelligence agencies to jam radio frequency signals or take over control of a drone, it is illegal for U.S. law enforcement to do so.

New York's famed parade, which this year will mark the 50th anniversary of the Stonewall riots, will be bigger than ever, with a longer route, 40,000 more marchers and 42 new additional floats. https://www.nydailynews.com/new-york/nyc-crime/ny-nypd-pride-parade-drones-security-new-technology-20190625-5jrkbsjmpbendeypfko2xadvi4-story.html

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North Dakota Reports Another Waiver for Flight Over People With a Drone Parachute Miriam McNabb June 26, 2019

The North Dakota Department of Transportation announced today that the agency has received a four-year waiver from the Federal Aviation Administration to operate Unmanned Aircraft Systems over people: specifically, for a DJI Mavic 2 series equipped with a ParaZero SafeAir parachute recovery system.

FAA approved the waiver and UAS operations over people as part of North Dakota's Integration Pilot Program which is designed to help FAA create new regulations that will enable the safe and secure integration of UAS (drones) into the national airspace systems.

"What's so exciting is that there is now a clear path of getting a waiver for UAS flights over people," according to Nicholas Flom, Executive Director of the NP UAS TS. "Now anyone with a DJI Mavic 2 can order a parachute and submit a waiver to fly over people. That was practically unheard of, until now." https://dronelife.com/2019/06/26/north-dakota-reports-another-waiver-for-flight-over-people-with-a-drone-parachute/

Drone photo shows crater WWII bomb explosion in Germany Haye Kesteloo Jun. 24th 2019

A drone photo shows a massive crater resulting from a bomb explosion in Germany. The crater is in a barley field near Ahlbach, Germany and according to experts is the result of a WWII bomb explosion that occurred on June 24 of this year. Officials say that the inexplicable explosion that shook residents of a central German town during the early morning hours last Sunday was "with almost absolute certainty" a World War II bomb. Drone photos later captured the crater that resulted from the nighttime explosion.

The crater captured in the drone photo measures 33 feet wide and 13 feet deep. After close inspection of the crater, bomb disposal experts concluded that "with almost absolute certainty" it had been caused by the explosion of a WWII bomb. They believe it was a 550-pound bomb that was dropped from a plane decades ago.

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Residents of the German town Ahlbach were rattled by the sudden explosion, which was strong enough to feel like an earthquake. It happened around 4 am last Sunday. There were no reports of injuries or casualties from the explosion. According to BBC News, unexploded WWII bombs are regularly found in Germany. After decades, as the detonators start to deteriorate, they can often explode without any outside forces acting on them, experts say.
https://dronedj.com/2019/06/24/drone-photo-crater-wwii-bomb-explosion-germany/

27Jun19

Drone Funding Is Fast and Furious Laura Forman June 26, 2019

Drone Racing League raises millions more in drone funding craze, and venture capitalists aren't the only zealots.

According to an SEC filing dated Monday, New-York based Drone Racing League Inc. has raised $26.4 million in a Series C round that could be as big as $50 million. Globally, drone funding is levitating: Last year, 364 venture-capital deals worth a combined $4.9 billion were done globally in the robotics and drones industry, according to PitchBook data.

The Drone Racing League is a "futuristic sport" that combines "the thrill of Star Wars pod-racing with the real-world adrenaline of Formula 1," according to the league's website. Pilots race drones at speeds topping 90 miles an hour through three-dimensional courses.

It isn't only pilots and hobbyists who tune in. DRL airs in 90 countries and has been watched by more than 55 million people globally. The company describes its fans as "mainly guys who are adrenaline-junkies, racing fans, gamers, drone heads and tech lovers." Last July, Automotive World described fans as "holding their breath during particularly complex sections of the course" at a race in Germany. https://www.wsj.com/articles/drone-funding-is-fast-and-furious-11561557426?mod=itp_wsj&ru=yahoo

Drone Beats Ambulance in AED Delivery Trials Betsy Lillian June 26, 2019

Drone Delivery Canada has completed phase one of a project to determine the effectiveness of delivering an automated external defibrillator via drone versus a traditional ambulance.

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The first phase of the AED On The Fly Pilot initiative, completed with Peel Region Paramedics in Ontario, achieved a 100% success rate, concluding that using DDC's proprietary drone delivery platform to enable rapid first responder technology via drone produces a reduced response time.

The partners simulated emergency calls in the Township of Caledon in the Region of Peel, dispatching DDC's Sparrow drone equipped with a specialized payload that included an AED. The delivery time of the drone was then compared against the traditional dispatching of first responder paramedics. In all cases, DDC's Sparrow drone arrived on-site ahead of the traditional first responder vehicles.

The company has released a video documenting the trials. https://unmanned-aerial.com/drone-beats-ambulance-in-aed-delivery-trials?utm_medium=email&utm_source=LNH+06-27-2019&utm_campaign=UAO+Latest+News+Headlines

Partners Delivering Drone Training for Disaster Response Betsy Lillian June 26, 2019

The Airborne International Response Team, a Florida-based nonprofit, has announced a new unmanned aircraft systems partnership with the Asociación de Profesionales de Drones, an organization with a presence in six Latin American countries. The partners will promote the use and standardization of UAS and associated technologies throughout the Caribbean and Latin America for emergencies and disasters. The memorandum of understanding also calls for mutual-aid and support capabilities for disaster preparedness, response, and recovery capabilities for complex incidents and significant emergencies, such as hurricanes, earthquakes or mudslides.

"APD has established itself as a leader in the commercial use of drones throughout the lower Americas," says Christopher Todd, executive director of AIRT. "We welcome the opportunity to help educate and train multinational public safety personnel on how to use unmanned aviation technology and related systems for emergency operations." https://unmanned-aerial.com/partners-delivering-drone-training-for-disaster-response?utm_medium=email&utm_source=LNH+06-27-2019&utm_campaign=UAO+Latest+News+Headlines

Launch timeline for Rocket Lab's "Make it Rain" mission June 26, 2019 Stephen Clark

Rocket Lab's light-class Electron launcher is set to take off on its seventh flight from New Zealand, aiming for a 280-mile-high (450-kilometer) orbit with seven small satellites for commercial

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customers, the U.S. military and university students. Rocket Lab calls this mission "Make it Rain," reflecting the wet climate at Spaceflight's Seattle headquarters.

The two-stage, 55-foot-tall (17-meter) rocket is scheduled for liftoff during a two-hour window opening at 12:30 a.m. EDT (0430 GMT) Thursday from Rocket Lab's commercial launch complex on Mahia Peninsula on New Zealand's North Island.

The privately-developed Electron launcher is making its seventh flight after its inaugural mission in May 2017 reached space, but faltered before reaching orbit, followed by six successful missions in a row that have deployed 28 satellites into low Earth orbit.
https://spaceflightnow.com/2019/06/26/launch-timeline-for-rocket-labs-make-it-rain-mission/

At this hospital, drones are the new medical couriers DOMINIC SMITH JUNE 25, 2019

RALEIGH, N.C. — At a sprawling hospital campus here, drones are becoming the new medical couriers. Blood and urine samples are ferried through the air to a central pathology lab, partly replacing the costly courier routes on the ground.

The drones, developed by San Francisco startup Matternet in partnership with UPS, make hourly deliveries between the two WakeMed locations. It's part of a government pilot program launched in March that was approved by the Federal Aviation Administration and North Carolina's Department of Transportation.

Ginn, a pilot and self-proclaimed "avnerd," foresees a time when WakeMed utilizes many more drones, both for routine and on-demand needs, with a completely automated system. "This is as close to a magic technology as you can get," he said. "You scan what you want to send, put it in a box, and it shows up on the other end."

Once the drones are at altitude, they're "inconspicuous" and not very noticeable, Ginn said. "I think most people assume the technology feels very invasive," he said, "but in reality, it often is not — as long as it's not flying into somebody's backyard."
https://www.statnews.com/2019/06/25/drones-medical-transport-wakemed/?mkt_tok=eyJpIjoiTVdGbU4yVTJaRE5oWVRBMSIsInQiOiJ5bjJvcXZtYWJpelwvbUxSb2F6dTlmdW9RSDAyZ0tVUUJlaVFKS1wvK1Q3K3B3cHpib3ZxdlRVazFCNGtcL29xcCswd3BkbVYrUlZkOEdsQUZKTVNhOWJXcjhcL3NVeW9LY1lwbjkySGRUamJOM3ZQMStSUnNmVmZiM241NnBuVmFQTW8ifQ%3D%3D

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Dronejacker: Daytona professor invents intelligent system June 27, 2019

DAYTONA BEACH, Fla. (AP) — An Embry-Riddle Aeronautical University professor has invented an artificial intelligence program that can hijack rogue drones, safely neutralizing any possible threat.

The Dronejacker has two sections. The first section consists of a series of listening posts outfitted with advanced microphones that would hear the drones so-to-speak as they neared an airport for example. Automated software would analyze the sound and if an unauthorized drone were detected, the system would use pattern-recognition algorithms to decipher the drone's video-streaming channel, interrupting the broadcast with a warning message.

If the message was ignored, the system would send the drone's information to a computer control center equipped with an antenna that would cross-reference a registration safe list of sorts before transmitting a new signal to hijack the drone. "It disrupts communication between the pilot and the drone," Kaminis said. "It detects the drone, finds out what language the drone speaks, activates an emulation system that mimics the drone's language, and snatches control away from the pilot."

The system would be fully autonomous, or totally independent of humans. It would also follow the same screening procedures that military systems employ. However, unlike military-grade systems, the technology isn't considered a weapon and it doesn't destroy the drone or cause it to crash. https://www.chron.com/news/article/Dronejacker-Daytona-professor-invents-14057250.php

Boeing Partners with Kitty Hawk on UAM Mark Huber June 26, 2019

Boeing and Kitty Hawk have formed a strategic partnership to collaborate on urban air mobility. Boeing said the agreement with Kitty Hawk, the developer of the two-seat Cora air taxi, is part of its “disciplined, long-term strategy of entering into value-added partnerships that enhance and accelerate growth and deliver key differentiators for customers.”

“Working with a company like Kitty Hawk brings us closer to our goal of safely advancing the future of mobility,” said Steve Nordlund, vice president and general manager of Boeing NeXt.

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"We have a shared vision of how people, goods, and ideas will be transported in the future, as well as the safety and regulatory ecosystem that will underpin that transportation."

Kitty Hawk is owned by Google co-founder Larry Page. Test flights of the Cora eVTOL were first announced in March 2018. The aircraft features a wingspan of 36 feet, an aft thruster, 12 lift fans, a maximum range of 54 nm, and a top speed of 95 knots. It is designed to operate at cruising altitudes of 500 to 3,000 feet. https://www.ainonline.com/aviation-news/general-aviation/2019-06-26/boeing-partners-kitty-hawk-uam

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