31May16

Company Aims To Build First Network Of Drones Delivering Medical Supplies In Rwanda.

NBC Nightly News (5/28, story 10, 2:00) reported that drones are increasingly being used for medical purposes, such as delivering blood or vaccines to health professionals who need them to perform procedures. The report highlighted Zipline, a company that aims to build a "delivery drone network" in Rwanda to provide medical supplies to people all over the country.

US Drone Sales Explode Over Last Year, Unfazed By FAA Rules. MarketWatch (5/27) reported that the number of UAV sales in the US "grew 224% from April of 2015 to April of 2016," according to the Retail Tracking Service at the NPD Group. According to the article, federal rules requiring UAS operators to register their craft "did nothing to hurt sales in the months following the October 2015 announcement." FAA data shows that "nearly half a million drone users in the U.S. have gone ahead" and registered their craft.

Drone Owners Now Exceed Number Of Registered Planes, Helicopters. WTOP-FM Washington (5/30) reports that according to the FAA, the number of registered drown owners has reached almost 460,000, exceeding the number of registered airplanes and helicopters. The article suggests that since drone owners only have to register once, it is likely that there are an even greater number of drones. The article mentions that the largest numbers of drone owners are in the Baltimore and DC area. The article adds that the DC area has some of the strictest drone regulations. For example, drones are banned "within a 15-mile radius of Reagan National Airport, meaning it's illegal to operate a drone within the Beltway."

SpaceX Completes Fourth Successful Rocket Landing.

The Washington Post (5/27) reported that SpaceX successfully launched its Falcon 9 rocket from Cape Canaveral on Friday evening, sending a Thaicom commercial communications satellite into orbit, and subsequently "pulled off another stunning landing on a ship 422 miles off the Florida coast that was broadcast in real time on its website." Although SpaceX had hedged its bets on successfully landing the spent rocket, given the long travel distance, the webcast "showed the rocket screaming back from space, its engines firing to slow it down," until it was "standing triumphantly once again." The onWashington Post (5/27) added that after the rocket had settled vertically on the sea barge, eight minutes after liftoff, a SpaceX webcast commentator said, "Falcon 9 has landed!"

Florida Today (5/27) reported that in a post on Twitter, SpaceX CEO Elon Musk "said the rocket's first stage had landed at close to the top speed it was designed to handle, possibly undermining its stability on the ship floating more than 400 miles offshore." The article suggested that Musk's tweet was "a reminder that despite a remarkable run of three straight booster landings and four in the company's last six missions, the landings remain experimental."

RAID Project Demonstrates Safe UAS Integration into Civil Airspace

Published: 25 May 2016

Air Partners of the RAID (RPAS ATM Integration Demonstration) Project have announced the successful completion of a flight trial campaign to evaluate and demonstrate the impact of innovative technologies and procedures for the integration of drones into unrestricted airspace, within current air traffic management environments. Led by CIRA, the Italian Aerospace Research Centre, the project involves Italian subject matter experts (DeepBlue, NAIS and Nimbus), Malta Air Traffic Service Provider (MATS) and the University of Malta. The project is co-funded by the SESAR Joint Undertaking, a European public-private partnership that is managing the development phase of a collaborative effort to completely overhaul European airspace and its air traffic management (ATM).
http://www.unmannedsystemstechnology.com/2016/05/raid-project-demonstrates-safe-uas-integration-into-civil-airspace/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=ed8c3b088f-

Unmanned_Systems_Technology_eBrief&utm_medium=email&utm_term=0_6fc3c01e8d-ed8c3b088f-111778317#sthash.RDoljFth.dpuf

FAA Tests FBI Drone Detection System at JFK Airport Published: 24 May 2016

The Federal Aviation Administration (FAA) has announced that, in conjunction with its government, industry and academia partners, it is expanding research on ways to detect "rogue" drones around airports. To this end, the FAA and partners have evaluated drone detection technology at John F. Kennedy International Airport (JFK) in New York. Over the last two years, the FAA has received numerous reports from pilots and residents about unmanned aircraft systems – UAS, or "drones" – around some of the nation's busiest airports, including JFK. "We face many difficult challenges as we integrate rapidly evolving UAS technology into our complex and highly regulated airspace," said Marke "Hoot" Gibson, FAA Senior Advisor on UAS Integration. "This effort at JFK reflects everyone's commitment to safety." Beginning May 2, the FAA conducted evaluations at JFK to study the effectiveness of a Federal Bureau of Investigation (FBI) UAS detection system in a commercial airport environment. Five different rotorcraft and fixed wing UAS participated in the evaluations, and about 40 separate tests took place.
http://www.unmannedsystemstechnology.com/2016/05/faa-tests-fbi-drone-detection-system-at-jfk-airport/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=ed8c3b088f-Unmanned_Systems_Technology_eBrief&utm_medium=email&utm_term=0_6fc3c01e8d-ed8c3b088f-111778317#sthash.1yCHjJ8b.dpuf

1Jun16

DJI Not Looking To Produce Delivery Drones As Amazon Tests Prime Air.

Bloomberg News (5/31) reports on Chinese drone manufacturer SZ DJI Technology's efforts to prove that the world's largest consumer drone maker produces "more than just glorified selfie sticks." DJI said it currently doesn't have plans to develop delivery drones, but its agricultural model could be modified for this purpose. Amazon and Alibaba are among the companies testing drones to cut "last mile" costs, and Jonathan Evans, CEO of Skyward a flight-planning software company said, "You break down the economics of supply chain management and you realize why Amazon's going after this...They can make a lot of money here." The article mentions that last year, the FAA issued the first exemption for agricultural drone use outside of research.

Drone Insurance Exec Discusses Commercial Drone Use. Mike Kelly, the media risk control manager at commercial drone insurer Prosight Specialty Insurance, spoke with ZDNet's (5/31) "Robotics" blog about drone regulations, obstacles to commercial drone use, and insurance issues relating to drones. The blog post notes that drone "naysayers" have "lost the war," and we are now in "the age of the commercial drone."

Dutch Police Planning Deployment Of Birds Of Prey To Catch UAVs.

The New York Times (5/31, Subscription Publication) reports that police in the Netherlands are training birds of prey "to harness their instincts to help combat the security threats stemming from the proliferation of drones." In their training, the birds are conditioned to intercept UAVs that can "pose risks to aircraft, drop contraband into jails, conduct surveillance or fly dangerously over public events." Detective Chief Superintendent Mark Wiebes called demonstration tests "very promising," and said that the birds would soon likely be deployed across the country pending final assessments.

N.D. UAS test believed to be world's first By Mikkel Pates, Agweek on May 31, 2016 at 10:27 a.m.

HILLSBORO, N.D. — What's believed to be the world's first test of its type using large unmanned aerial systems for agricultural data gathering in a public-private partnership took place at the Hillsboro (N.D.) Municipal Airport. John Nowatzki, the North Dakota State University agricultural machine systems specialist for the Extension Service, says a May 20 test was the first test of UAS vehicles for agricultural data gathering he's heard of in the U.S. It is the first in the world, he says.

"We're flying over large areas," Nowatzki says, noting the footprint of the study corridor is 40 miles by 4 miles. The Extension Service preceded the tests with Steele and Traill county public meetings and notices, specifically to address privacy concerns.

The project uses the Hermes 450, a plane that weighs 1,200 pounds and has a 35-foot wingspan. The plane is owned by Elbit Systems of Haifa, Israel. It carries up to 400 pounds of equipment and can scan at 92 mph, using an internal combustion engine. The project is funded by a Research ND grant through the Department of Commerce, in funds from the North Dakota Legislature. The funds must go through either NDSU or the University of North Dakota, and must include an actual-dollar grant — not just payment-in-kind — from a private entity.

The aircraft has the ability to stay in the area for more than 12 to 15 hours and collect imagery at more than 50,000 acres per hour at 2-inch ground sample size, Nowatzki says. Before this aircraft, small UAS vehicles have been able to collect imagery at only about one square mile per hour. Jake Stoltz, mission manager with the Northern Plains UAS Test Site, based in Grand Forks, N.D., says this is the first time a UAS of this size has operated from a civil airport in civil air space, coexisting with manned aircraft. The FAA in 2013 selected North Dakota as one of six Federal Aviation Administration test sites, and it was responsible for making the complicated arrangements for the flight. http://www.agweek.com/news/north-dakota/4044223-video-nd-uas-test-believed-be-worlds-first

2Jun16

FAA To Test Anti-UAV Defense System At US Airports.

BBC News (UK) (6/1) reports that the FAA is testing "a UK-developed system capable of jamming signals to small drones" as part of an expanded effort "to source technology that can detect small, unmanned aerial vehicles near airports." The Anti-UAV Defense System (AUDS) was created by British developers Enterprise Control Systems, Blighter Surveillance Systems and Chess Dynamics. According to FAA Senior Advisor Marke "Hoot" Gibson, "Sometimes people fly drones in an unsafe manner. ... Government and industry share responsibility for keeping the skies safe, and we're pleased these three companies have taken on this important challenge." BBC News notes that US-based firms Gryphon Sensors LLC and Sensofusion will also participate in the trials.

The Telegraph (UK) (6/1) explains that AUDS "can detect a drone up to six miles away, track it using infrared cameras, and then stop it in its tracks by blocking the radio signal it uses to operate." Mark Radford, a member of the AUDS team, stated, "Using AUDS, the operator can effectively take control of a drone and force a safe landing inside or outside the airport perimeter," adding, "The system can also assist airport authorities to track down the UAV pilots for prosecution by providing video or radar evidence."

Orbital ATK Completes Successful Antares Rocket Test At Wallops Island.

The Washington Post (6/1) reports that on Tuesday, Orbital ATK performed "a successful full-power test of the of the upgraded first stage propulsion system of its Antares rocket from NASA's Wallops Flight Facility." Over the next two weeks, engineers will examine testing data to determine whether all test parameters were met. If confirmed, the spaceflight company "will resume cargo resupply services to the International Space Station from the Wallops Flight Facility in July."

Earth-Imaging Data Used By LANL Spin-Off To Improve Crop Yields.

Scientific American (6/1) reports on San Francisco-based space startup Planet Labs, which works to create small low-cost Earth-imaging spacecraft that can detect change in landscapes to prevent the "spread and extent" of forest fires or illegal mining. Among other humanitarian applications detailed in the story, Descartes Labs, a startup spun off from Los Alamos National Laboratory (LANL), "is using the influx of data from Planet Labs and other Earth imagery providers to predict corn crop yields faster and more accurately than previously possible by the USDA at a resolution of 1/500th of an acre."

Bayer Teams With Planetary Resources To Develop Satellite Crop Monitors.

The Seattle Times (6/1) reports that German pharmaceutical company Bayer is teaming up with Planetary Resources to develop satellite technology to monitor crops. Bayer plans to use satellite images to build products that "help farmers save water and know when it's best to plant and harvest crops."

Senate Appropriations Committee Proposes $18 Million For Coast Guard UAS Studies.

Defense Daily (6/1) reports that the Senate Appropriations Committee last week proposed an additional $18 million for the Coast Guard's R&D division to determine, in the words of the Committee, "the use of ultra-long endurance UAS in support of the Department's UAS needs, particularly for ISR (intelligence, surveillance and reconnaissance) in the source and transit zones." The Coast Guard currently doesn't operate any UAS units, though tests have been conducted using "a number of hand-launched unmanned aircraft."

3Jun16

Walmart Wants To Use Drones To Accelerate Distribution Operations.

The New York Times (6/2, Subscription Publication) reports that Walmart is testing the use of flying drones to manage inventory at its large distribution centers, and expects to be using the aerial devices at one or more of its facilities in six to nine months. During a demonstration on Thursday at one of the retailer's warehouses in Bentonville, Arkansas, "a drone moved up and down an aisle packed nearly to the ceiling with boxes, taking 30 images per second." Shekar Natarajan, Walmart's vice president of Last Mile and Emerging Science, "explained that the machines could help catalog in as little as a day what now takes employees about a month."

Reuters (6/2) adds that Natarajan said, "We are still in early phases of testing and understanding how drones can be better used in different types of business functions." Business Insider (6/2) mentions that although the technology does not currently have a specific rollout plan, Walmart plans "to integrate the drones into all of its distribution centers." According to the AP (6/2), Walmart is also testing the applications of virtual reality and artificial intelligence in the warehouse environment.

Bloomberg News (6/2) reports that Walmart has also sought permission from the FAA to test drones outdoors, potentially to deliver orders to customers. Bloomberg explains that Amazon and Google are testing the use of drones as tools for facilitating customer delivery, though the FAA has yet to develop rules governing commercial drone deliveries.

Fourth Recovered SpaceX Rocket Arrives at Port Canaveral.

The Washington Post (6/2) reports that after successfully launching and then landing vertically on a sea barge last week, SpaceX's fourth recovered first-stage booster pulled into Port Canaveral on Thursday, "leaning to one side but still standing tall on its ocean-landing platform." The article explains that the SpaceX is working to reuse its recovered

booster, and that the “the first one may again fly in two to three months.” SpaceX CEO Elon Musk “said the booster represents 70 percent of the cost of a Falcon rocket, on the order of $30 million to $35 million.”