27Feb17

UAV Mapping Startup AirMap Gains \$26M In Funding From Microsoft, Airbus.

Business Insider (2/24) reported that earlier this month, real-time UAV-mapping startup AirMap completed a \$26 million funding round backed by companies including Microsoft and Airbus. AirMap's software provides UAV operators with information about other aircraft in the surrounding airspace as well as FAA No-Fly Zone updates, and Microsoft's investment likely demonstrates that the company is "assuming that its large enterprise clients will soon integrate drones into their operations." Such technologies, which incorporate geo-fencing and collision avoidance, could "make regulators feel more comfortable" with the growing proliferation of UAVs.

New Mexico Senate Committee Approves UAV Regulation.

The AP (2/24) reported that New Mexico's Senate Public Affairs Committee has advanced a proposal to ban UAVs from flying within 500 feet of critical-infrastructure facilities such as power plants and refineries. The proposal sponsored by New Mexico State Sen. Greg Baca (R) "cleared its first hurdle" with the vote and now moves to another committee. Opponents of the measure "questioned whether such rules were outside the bounds of New Mexico's jurisdiction."

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Facebook To Increase Frequency Of Aquila UAV Test Flights.

Bloomberg News (2/27) reports that Facebook plans to step up test flights for its experimental Aquila UAV, a solar-powered, high-altitude glider featuring "a wingspan wider than a Boeing 737." The company conducted its first test flight of the massive UAV in June last year, during which the aircraft "suffered a 'structural failure' as it was coming in for landing." At the Mobile World Congress on Monday, Facebook Head of Engineering and Infrastructure Jay Parikh said, "We learned a lot, from data, to how it turned, how it handled, and the battery performance. But we need to fly a lot more and more regularly." The UAV is part of Facebook CEO Mark Zuckerberg's drive to find "new ways to connect...much of the world's population to the internet."

ESA Seeking Smallsats For 2018 Vega Mission.

Space News (2/27, Subscription Publication) reports that the ESA has announced that it is seeking small satellites for a late 2018 launch of an Arianespace Vega rocket, which will test the agency's new satellite dispenser under its Small Spacecraft Mission Service (SSMS) program. In the announcement, made jointly with the European Commission on February 13, the agency said that it would accept a range of satellite sizes, from mini-satellites (200 to 400 kilograms) to cubesats (1 to 25 kilograms).

South Dakota Lawmakers To Consider New UAV Rules Today.

The AP (2/27) reports that on Tuesday, South Dakota lawmakers will consider a new bill that outlines restrictions for UAV use and makes operators liable for any damages caused by crashes. The bill bans UAVs from landing on private property without the owner's consent and

makes using a UAV to photograph or observe people in private places a misdemeanor. The bill has passed the state Senate and will now be considered by the House Transportation Committee. According to the FAA, more than 2,000 hobbyist UAV owners are registered in the state.

Researcher Developing Swarming UAV Technology To Map Oil Spills.

Science Daily (2/27) reports that University at Buffalo Assistant Professor of Mechanical and Aerospace Engineering Souma Chowdhury has developed a software package for programming a swarm of inexpensive UAVs to map an oil spill. Chowdhury presented his paper, "A Swarm-Intelligence Approach to Oil Spill Mapping Using UAVs," at the AIAA Science and Technology Forum (AIAA SciTech Forum) in January. He explained that the "thematic focus of my lab is developing computational design approaches that take inspiration from nature."

1Mar17

Harris Corp Developing Network For UAV Operation Beyond Line-Of-Sight.

The Orlando (FL) Sentinel (2/28) reports that a team of researchers that includes Harris Corp. "is pioneering a new network" that will enable UAV operators to fly the unmanned aircraft beyond their line of sight, which the FAA currently prohibits. The team will build their first "wide-area network" for testing in North Dakota under a \$500,000 state grant, and has plans for further expansion throughout the US. Harris Commercial UAV Solutions Vice President and General Manager George Kirov said the team believes that the solution "would help industries mature and progress faster." Companies including Google and Amazon are pursuing wider UAV use, but regulators are struggling to catch up with the technology's advancements.

Anti-UAV Technology Remains Illegal In US.

<u>Wired</u> (2/28) reports that new technology designed to detect and disable potentially-dangerous UAVs is becoming reliable but remains illegal for civil use in the US, even in emergencies. Some solutions violate anti-jamming regulations, while others "run afoul of antiwiretapping and computer-hacking laws." The anti-jamming regulations are designed to prevent the disabling of networks like WiFi and those used by emergency responders, but companies "hope that any new regulations will include a variance for emergency jamming." The FAA is currently hosting meetings with the FCC to develop standards for anti-UAV technologies.

Canada Conducts First BVLOS Flight AUVSI News

On Feb. 24, the first beyond visual line of sight (BVLOS) flight of a small UAS was flown in Canada. The flight was conducted at the Foremost UAS Range, located in Alberta, Canada.

To conduct this landmark flight, Ventus Geospatial Inc., which is the first company to meet the requirements necessary to conduct a UAS flight under BVLOS conditions at Foremost, worked in coordination with Canadian Unmanned Inc., to fly the Aeryon SkyRanger UAS, which was produced by Ontario-based Aeryon Labs. The multi-rotor, vertical takeoff and landing (VTOL) UAS has been used across a number of industries, including the military, public safety and commercial sectors.

"Aeryon is proud to support Transport Canada and our aviation partners using the SkyRanger, which is the first VTOL sUAS to conform to the requirements established by Transport Canada for UAV system airworthiness and design," says Aeryon Labs 'President & CEO Dave Kroetsch via press release. "Transport Canada continues to be a progressive airspace regulator, establishing standards and guidelines, like BVLOS, that enable safe UAS operations within Canada." http://www.auvsi.org/blogs/auvsi-news/2017/02/27/canada-conducts-first-bvlos-flight

Record Setting BLOS Package Delivery Flight Flown in Nevada <u>AUVSI</u> News

On Feb. 15, a record setting, long distance beyond line of sight (BLOS) delivery flight was conducted in Nevada, in which the Drone America Savant UAS flew a total distance of more than 39 miles, making it the longest drone delivery flight in history. During the flight, which was flown by a team from Drone America, the UAS flew BLOS for one hour.

The UAS, which reached an altitude of 1,500 feet AGL, was used to deliver a package to the Hawthorne Industrial Airport in Hawthorne, Nevada. The package contained emergency supplies in a simulated lost hiker scenario.

"For many years Drone America's team has been focused upon building turnkey solutions that are both commercially viable yet also have a beneficial effect upon the world in which we live," says Drone America's CEO and founder Mike Richards via press release. "Remote critical package delivery can include such items as medical equipment (AED) and supplies such as vaccines, EpiPens, anti-venom, even a Search and Rescue survival package. These achievements bring us closer to becoming a self-sustaining, Nevada-based, and American-made corporation that gives back."

Dr. Chris Walach, the Nevada UAS Test Site Director, says, "today was a new long distance flight record in Nevada and in the National Airspace. We are a major step closer to commercial package delivery on a large scale in Nevada and in the National Airspace." Finally, Nevada Governor Brian Sandoval says, "this achievement is a testament not only to the skill of the team at the Nevada Institute for Autonomous Systems and Drone America, but also the support that has been shown by the entire State of Nevada to support this important initiative."

http://www.auvsi.org/blogs/auvsi-news/2017/02/24/record-setting-blos-package-delivery-flight-flown-in-nevada

DJI Introduces New Matrice 200 Drone Series for Aerial Inspections AUVSI News

DJI has unveiled its new Matrice 200 drone series (M200), which is built to carry out missions involving inspections of critical infrastructure and energy facilities, as well as construction site mapping and missions involving public safety. The body of the UAS is weather and water resistant, making it ideal for field operations, and is also capable of folding, making it is easy to carry and set up. The platform also offers the company's first upward-facing gimbal mount, making it possible to conduct inspections underneath bridges, towers and other structures.

"Drones have quickly become a standard part of the enterprise toolkit and industrial users have come to rely on DJI technology to efficiently collect aerial data," says Paul Guo, Director
Enterprise Solutions at DJI, through a company press release. "With the M200 series, DJI introduces a holistic solution designed specifically for these users. We are revolutionizing professional workflows by making it possible to use advanced sensors in various combinations to make sophisticated tasks such as bridge inspections, land surveying and search-and-rescue missions, easier, safer and more reliable than ever before."

The UAS, which has a maximum flight time of 38 minutes, is compatible with a number of DJI's cameras, including the X4S and X5S cameras, as well as the Z30 zoom camera and the XT camera for thermal imaging. It also has a forward-facing first-person view camera, which allows for the monitoring of separate images on dual controllers by a pilot and a camera operator. For the safest operation of the system, the UAS is equipped with several safety features, including obstacle avoidance sensors, which face forward, up and down, and an ADS-B receiver, the DJI AirSense, which automatically provides real time information about the current location of nearby manned aircraft that are equipped with ADS-B transmitters.

http://www.auvsi.org/blogs/auvsi-news/2017/02/27/dji-introduces-new-matrice-200-drone-series-for-aerial-inspections

Resource Center at FAA UAS Symposium on waivers and certifications

At the FAA UAS Symposium in Reston, Virginia, on March 27 to 29, the agency will have a Resource Center staffed by subject matter experts to answer questions on everything from waivers and certifications to policies and regulations. AUVSI is co-hosting the symposium, which will feature speakers and workshop sessions that will cover topics such as options for operating in the national airspace, the future of airspace authorization, and how to address challenges around traffic management, infrastructure and security. For more information about the symposium and to register, go to http://www.auvsi.org/faa2017/home

2Mar17

First-Ever Jail Sentence For UAV Incident Handed Down.

Fortune (3/1) reports that in what is "likely the first time a custodial sentence has been dol[ed] out" for a UAV crash, a judge on Friday sentenced a Seattle man to 30 days in jail for operating a UAV that knocked a woman unconscious in 2015. The man was convicted of reckless endangerment, and while the judge acknowledged that the injury was not intentional, he said that the man "engaged in conduct that put people in danger of being injured." According to The Verge (2/27), "neither the Center for the Study of the Drone nor the Association for Unmanned Vehicle Systems International knew of a precedent for jail time" for a UAV incident.

3Mar17

Virgin Galactic Spins Off Satellite Launch Service Into Virgin Orbit.

The AP (3/2) reports that on Thursday, Virgin Group founder Sir Richard Branson announced that Virgin Galactic has created a separate company called Virgin Orbit for its small satellite launch provider business. Veteran aerospace executive Dan Hart, former The Boeing Company vice president of government satellite systems, was named president of the new company. The launch provider has been developing its LauncherOne system, which is released from a modified Boeing 747 jet and has already drawn a "substantial" number of orders, according to Virgin. SPACE (3/2) reports that "Virgin Galactic CEO George Whitesides will hold the same role in the spin-off." Whitesides said that the company should ultimately be able to produce "a couple of dozen or more launch vehicles per year."