Airbus Introduces 3D-Printed Miniature Aircraft.

AFP (6/5) reports that at the International Aerospace Exhibition and Air Show in Berlin last week, Airbus rolled out the unmanned aerial vehicle Thor, "the world's first 3D-printed aircraft." The article explains that Thor, which stands for "Test of High-tech Objectives in Reality," weighs just 46 pounds, measures less than 13 feet in length, and "resembles a large, white model airplane." However, despite the small size, Airbus views the aircraft as a milestone toward "an aviation future when 3D printing technology promises to save time, fuel and money." Detlev Konigorski, who led the development of Thor, said, "This is a test of what's possible with 3D printing technology," adding, "We want to see if we can speed up the development process by using 3D printing not just for individual parts but for an entire system."

FAA Senior UAS Adviser Says Agency Could Put Limit On Max Speed, Altitude Of Drones.

The <u>Pittsburgh Tribune-Review</u> (6/3) reports that FAA Senior Adviser on UAS Integration Marke "Hoot" Gibson "said FAA officials could announce new small-drone commercial use rules within the next few weeks" that would "apply to unmanned aircraft that weigh less than 55 pounds" and possibly "include provisions that would limit drone flights to daytime hours, speeds of 100 mph or slower, and an altitude ceiling below 500 feet."

Indian Police Could Use Drones During Protests. The <u>Times of India</u> (6/5) reports that police in Odisha, India could start using drones to monitor traffic and crowds during gatherings. Director General of Police K B Singh said the police have been "using drones in Maoist-affected areas for aerial surveillance" and have purchased six new drones for "crowd management."

Colorado's Homegrown Drone Industry Examined. The Colorado Springs (CO) Gazette (6/4) reports on the UAS industry in the United States, profiling some of the companies in Colorado that "are trying to harness the power of data alongside the images they collect to help commercial businesses, farmers and government entities learn more about the land they own or are building on." As AGL Drone Services owner Ken Hanes said, "Everyone just thinks we take pretty video," but in fact "There's so much data available that our customers don't know what to do with it all." Hanes also talked about the current FAA rules on commercial UAS operation, noting that he himself is a licensed pilot, one of the current requirements for receiving a Section 333 exemption to operate drones for commercial purposes.

7Jun16

ISS Astronauts Enter Inflatable Space Room.

The AP (6/6) reports that astronauts at the International Space Station (ISS) opened the doors to the first inflatable space room on Monday and "floated inside." The AP notes that the Bigelow Expandable Activity Module (BEAM) arrived at the ISS in April and was inflated to its full size in late May. NASA astronaut Jeffrey Williams, who was first to enter the space room, "said it was pristine but cold inside." NASA Mission Control "said the temperature registered 44 degrees, as anticipated, at one end of the 13-foot-long, 10 ½ -foot-wide chamber." According to the article, Williams and cosmonaut Oleg Skripochka "collected air samples, took expansion measurements and made sure the air-pressurization tanks were empty, before exiting and closing the door behind them." Not UAS or SmallSats, but a milestone nonetheless.

Opinion: Amazon Takes "Slow-And-Steady" Approach To Drone Delivery.

<u>PYMNTS</u> (6/6) writes, "Like the high school quarterback or the trust fund baby, Amazon very rarely finds itself behind the eight ball," but "nimbler competitors" are outdoing the online retailer's "vaunted" Prime Air program. Walmart recently announced plans to use drones in its warehouse, while DHL during testing has been able "to automate the

entire drone delivery process." The article notes that the last time Amazon made any noise regarding drones was in January when Vice President for Global Public Policy Paul Misener offered "vague" details of Prime Air's progress in an interview with Yahoo. Though the company "billed itself as the flag-bearer of" drone delivery, PYMNTS states that "it's increasingly looking like there's still more work to do to" create a safe and flexible drone delivery program. The article argues that Amazon's "slow-and-steady" approach in the end could pay off for the company, as its customers are used "a very particular idea of the level of service and convenience Amazon can achieve and does consistently make good on."

Globe UAV Announces Long Distance Drone with HD Video Transmission

Published: 07 Jun 2016

Globe UAV GmbH, a developer of unmanned aerial vehicles (UAVs), has announced the introduction of its GUAV7 drone, a long distance unmanned aircraft equipped with permanent HD video transmission for civilian use. The system has been developed in accordance with the needs of police and firefighters, as well as for monitoring roads, railways, power lines or solar power plants.

The operator controls the GUAV7 from a PC with a mouse or joystick. During the flight, the drone provides the pilot with real-time video with latency of only 100ms. The data is transferred via 4G mobile Internet, making the system controllable from almost anywhere in the world. 360° laser scanning and ultrasonic sensors are utilised for the identification of buildings and mobile obstacles, thus providing automatic crash avoidance.

At the CIDEX security fair in Beijing, Globe UAV recently demonstrated the GUAV7. The system was controlled by the pilot in Beijing, while the drone flew in Germany (within sight of an administrator who could take over for safety reasons at any time, as required by European law).

The flight time of GUAV7 is currently 60 minutes.

http://www.unmannedsystemstechnology.com/2016/06/globe-uav-announces-long-distance-drone-with-hd-video-transmission/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=38790da04b-Unmanned_Systems_Technology_eBrief&utm_medium=email&utm_term=0_6fc3c01e8d-38790da04b-111778317_

PrecisionHawk and Munich Re partner to Enhance Disaster Assessment using Drones Published: 03 Jun 2016

PrecisionHawk and the reinsurer firm Munich Re, have partnered to enhance insurance assessments worldwide by providing faster response times and increased reporting accuracy in the aftermath of a natural disaster. The partnership was recently exercised following an earthquake in Ecuador, where PrecisionHawk collected drone imagery of the entire disaster site within days of its occurrence. The images were processed and analyzed in PrecisionHawk's data software and delivered to Munich Re. Through this partnership, Munich Re aims to more effectively assess the extent of damages and respond to claims quicker.

PrecisionHawk's service team uses a fleet of drones, including its own Lancaster 5, a small, fixed wing platform, to collect aerial imagery at the identified disaster site. The data is analyzed in DataMapper, the industry leading software platform that analyzes and manages aerial data. In one 45-minute flight that

covers nearly half a square mile, the drones can collect imagery at extremely high resolution and deliver data that can reduce the need to deploy adjusters to affected areas. This increase in safety for employees, such as reaching areas that are dangerous or inaccessible for manual inspection, and efficiency in overall claims processing for members has piqued the interest of the insurance industry globally.

http://www.unmannedsystemstechnology.com/2016/06/munich-re-selects-precisionhawk-to-enhance-post-catastrophe-assessment-with-

<u>drones/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=38790da04b-Unmanned_Systems_Technology_eBrief&utm_medium=email&utm_term=0_6fc3c01e8d-38790da04b-111778317</u>

8Jun16

AMA Analysis Finds Pilot UAV Sightings On Decline.

The Washington Post (6/7) reports that an Academy of Model Aeronautics (AMA) analysis of FAA data found that "even as drone sales surge, drone sightings by airplane pilots have declined." The Post quotes AMA representative Rich Hanson as saying, "We're pretty confident that education is one of primary factors if not the primary factor." The analysis found that UAV sightings "peaked in the summer of 2015 and have declined since," and concluded that "only 3.3 percent of the incidents" of reported pilot UAV sightings "were actually near misses or close calls." USA Today (6/7) reports that AMA Executive Director Dave Mathewson said, "We're glad to see a decline in (drone) sightings as more people are learning how to fly responsibly."

Connecticut Court To Decide If Consumer UAVs Are Subject To FAA Authority.

In a Forbes (6/7) column, John Goglia reports on a Connecticut court case that will decide whether consumer UAVs, "so-called model aircraft," are subject to FAA authority. The FAA is investigating Connecticut father and son Austin and Bret Haughwout for two videos, "one of a modified drone firing a weapon and another of a modified drone flaming a turkey on a spit," but the Haughwouts have refused to submit documents to the FAA "unless a court orders them to do so." According to the Haughwout's pro bono attorney, the FAA's definition of "aircraft" is at the heart of the challenge.

9Jun16

Passenger Drone Testing To Begin In Nevada.

The NPR (6/8) "Two-Way" blog reports that the state of Nevada and Chinese aerospace company EHang plan to test the "world's first passenger drone capable of autonomously carrying a person in the air for 23 minutes" later this year. The Governor's Office of Economic Development (GOED) and the Nevada Institute for Autonomous Systems agreed last month to "help guide EHang through the FAA regulatory process with the ultimate goal of achieving safe flight," the GOED statement said. The EHang 184 premiered at the Consumer Electronics Show in January in Las Vegas, Nevada. There is doubt however that "drone taxis" will become a reality in the near future, considering that "fully autonomous road vehicles are unlikely to be widely available until the middle of next decade."

<u>CNN Money</u> (6/8) describes the EHang 184 as a "jumbo drone that carries one passenger" and does not contain a pilot. The passenger "sits in the drone, tells the drone's navigation system where they want to go, and it controls the flight path." If the UAVs are approved by the FAA, "EHang's central software system will pre-plot and coordinate all drone flights to avoid potential overlapping paths."

Entrepreneur Magazine (6/8) adds that the EHang 184 weighs 440 pounds and "looks a little like the nose of a helicopter, but instead of wings on the top, it has four legs with two propellers." When it reaches an altitude of about 11,500 feet, "it can fly for roughly 23 minutes at a little over 60 mph." An Ehang representative told <u>Tom's Guide</u> (6/8) that each UAV "may cost between \$200,000 and \$300,000." <u>The Verge</u> (6/8) also covers this story.

NASA Holding 2016 UAV Conference In Central New York.

The <u>Syracuse (NY) Post-Standard</u> (6/8) reports that NASA will hold an international UAV convention this fall at "sites in Central New York and the Mohawk Valley that are affiliated with NUAIR Alliance, a nonprofit consortium that runs one of six national test sites for drones authorized" by the FAA. According to the Post-Standard, NUAIR administers "many of its tests at the former Griffiss Air Force Base in Rome." NASA selected the Syracuse region for the conference because New York is investing \$250 million "to develop an air traffic management system for drones so they can be safely integrated into the nation's commercial airspace." The first Unmanned Aerial Systems Traffic Management Convention was held at NASA Ames Research Center at Moffett Field, California in July 2015.

10Jun16

Researchers Hack UAS Units.

The <u>Daily Mail</u> (6/9) reports that researchers from Johns Hopkins University have found a number of UAS units have hackable vulnerabilities, which can force the units to land elsewhere or crash. Five graduate students and a professor "performed wireless network penetration testing" on a unit, and were able to force it to shut down by sending 1,000 wireless connection requests in a row, overloading the system. Another exploit saw the researchers send a "fake digital packet" that told the unit "the packet's sender was the drone itself," which eventually led the UAS to cut contact with itself.

Shadow UAS Racks Up More Than 1 Million Hours of Flight By AUVSI News

In the spring of 2010, unmanned aircraft operated by the U.S. Army reached the milestone of one million flight hours. That combined flights from the Raven, Hunter, Gray Eagle and Shadow UAS, with half of them coming from the Shadow alone. On June 6, Shadow maker Textron Systems announced that the unmanned aircraft had surpassed that same milestone, this time on its own.

The Shadow was introduced in 1999, but has received numerous upgrades over the years, including all-digital communications, increased bandwidth, more onboard power, extended wings and engine improvements, among others. The Shadow is currently in use by the U.S. Army, Marine Corps, Special Operations Command and the militaries of Italy, Sweden and Australia. More than 85 percent of its million-plus flight hours occurred during combat operations, the company says. One million flight hours is equal to a little over 114 years.