30Jan17

Airbus To Conduct First Flight Of VSR700 VTOL UAV This Year.

[IHS Jane's 360](1/27) reported that on Friday, Airbus Helicopters CEO Guillaume Faury announced that the company expects to conduct the first flight of its recently-revealed VSR700 VTOL UAV "in the coming months," with military certification to follow in 2019. Airbus is developing the aircraft with French naval shipbuilder DCNS for "the French Navy's Système de Drones Aériens de la Marine (SDAM) requirement." The UAV "is essentially a Hélicoptères Guimbal Cabri G2 light helicopter...fitted with autonomous technologies," and "is in the class of the Northrop Grumman MQ-8B Fire Scout."

31Jan17

Companies Vying To Develop First Practical Flying Car.

The [AP](1/30) reports that nearly a dozen companies are competing to develop the first practical "flying car," although "most aren't cars at all" and instead resemble multi-rotor VTOL helicopters. Those developing prototypes include smaller startups and "some with deep pockets such as...Airbus." Zach Lovering, who is leading Airbus' effort to develop a "flying taxi" called the Vahana, said that such products could "revolutionize urban travel" in "as little as 10 years." Before that becomes a reality, companies will have to convince regulators including the FAA that such aircraft are safe and determine how they will navigate urban environments – a problem that potentially could find a solution in NASA's development of an air traffic control system for UAVs. In a statement, the FAA said that it is taking a "flexible, open-minded, and risk-based approach" to the prospect of such aerial vehicles, and explained that it believes they "could have a positive effect" once the technology matures.

General Atomics Launches "SkyGuardian" Variant Of Predator B UAV.

[UPI](1/30) reports that General Atomics Aeronautical Systems Inc. (GA-ASI) announced that it has launched the new "SkyGuardian" variant of its Predator B UAV "that meets international standards for flying in civilian airspace." The variant, developed in coordination with the German Military Aviation Authority, is compliant with NATO's UAV System Airworthiness Requirements and Britain's DEFSTAN 00-970 standards. GA-ASI CEO Linden Blue said the SkyGuardian name illustrates the UAV's capacity to perform "non-military missions like border-surveillance, maritime patrol, and relief over-watch in cases of natural disaster."

UK's Emerging UAV Sector Growing Quickly.

The [Financial Times](1/30, Subscription Publication) reports that the number of UK companies offering UAV services has grown from 150 three years ago to 2,380 as of this month.

India's Space Agency To Attempt To Launch 104 Satellites From Single Rocket.

The [Wall Street Journal](1/30) reports that next month, the Indian Space Research Organization plans to launch 104 satellites from a single Polar Satellite Launch Vehicle. If successful, the mission would set a new record, surpassing Russia's deployment of 37 satellites from one rocket in 2014, and would solidify India's reputation as a cost-effective and reliable destination for satellite launches. Mission Director B. Jayakumar, who explained the scheduled deployment, said that the mission – which will carry three Indian satellites **and 101 nano satellites from five other countries** – aims to utilize the excess capacity on the launch vehicle.

1Feb17

Critics Target Utah Bill That Would Restrict Some UAV Use.

On its website, [KSL-TV](Salt Lake City (1/31)) reports that legislation that would restrict some UAV use in Utah failed to gain support in a state Senate committee after critics charged that the bill "takes a sledgehammer to a problem that could be fixed with a scalpel." SB111, sponsored by Sen. Wayne Harper (R), sought to supplement FAA rules to "address potential voyeurism, stalking, spying and other invasions of privacy" by UAV operators. Harper said, "In conjunction with the FAA rules, we are going to have one statewide set of rules rather than rules in every city and county and unincorporated area." However, critics objected to the bill during the Monday committee meeting, with Libertas Institute's Connor Boyack claiming that the legislation "criminalizes all sorts of people who are harmlessly using their drone."

Indiana Lawmakers Considering Bill To Criminalize UAV "Voyeurism."

The AP (1/31) reports that new legislation in Indiana would criminalize "remote aerial voyeurism" through the use of UAVs as well as using the devices to interfere with public officials. On Tuesday, an Indiana Senate panel "held the bill to refine its language after discussing it." Sen. Eric Koch (R), the sponsor of the bill, said that his aim is to get the state "out in front" of the issue to guard people's privacy. Many states, including Louisiana, Arkansas and Mississippi, already have passed laws to address such privacy concerns related to UAVs.

New Detect-and-Avoid System for Drones Completes BLOS Flight Tests Published: 30 Jan 2017

Vigilant Aerospace has completed successful beyond line-of-sight (BLOS) flight testing of its new FlightHorizon detect-and-avoid collision avoidance system for unmanned aircraft at the NASA Armstrong Flight Research Center in Edwards, California. The tests demonstrated the system's ability to provide beyond line-of-sight flight safety for both small and mid-sized unmanned aircraft to help comply with FAA regulations and integrate drones into the national airspace.

The flights tested the system's detect-and-avoid (DAA) algorithms, hardware integration and user interface performance and included nearly 100 scripted encounters between unmanned aircraft under realistic flight conditions. The system successfully detected and tracked intruder aircraft and provided traffic alerts and collision warnings on 100% of air traffic during the encounters.

Eighteen different scenarios were flown multiple times using two DJI Phantom 4 drones with one aircraft acting as the primary ownship while the other acted as an intruder aircraft. The scenarios triggered the system's traffic alerts, threat alerts and collision warnings, allowing the drone pilots to avoid collisions between the aircraft. The encounters included beyond line-of-sight flights that simulated real-world scenarios in which visual detection of approaching aircraft by ground-based unmanned pilots might not be possible due to distance, weather, altitude and speed.

The tests were observed by the FAA's senior UAV regulator, by an FCC observer to monitor radio transmissions, and were the culmination of a multi-month program of development, safety planning and test preparation.
http://www.unmannedsystemstechnology.com/2017/01/vigilant-aerospace-completes-blos-uas-testing-nasa-flight-research-center/

Cyberhawk Railway Inspection Completed Using UAVs By AUVSI News

posted 6 days ago

The first internal and external structural inspection for the United Kingdom rail network has been completed by Cyberhawk Innovations. "Over the past two years we have grown our portfolio in the rail sector, due to the vast benefits on offer through the use of our UAV technology. We have carried out multiple inspection and survey projects across the U.K., and this project is testament to our ability to deliver more complex and challenging infrastructure inspection projects," says Cyberhawk Commercial Director Phil Buchan.

Cyberhawk used multiple, specially made unmanned aircraft to collect photos of the railway. The UAS method provided for a quick and safer solution, opposed to ground work, which involves scaffolding, the company says. The two-day inspection took place at Rugby rail station in Warwickshire, England.

"We were awarded a framework agreement with Network Rail in 2014, which was one of the many reasons we were chosen to undertake project, along with our Congested Areas Operating Safety Case permission to fly UAVs in urban areas and in close proximity to structures, vehicles and people," says Buchan. http://www.auvsi.org/blogs/auvsi-news/2017/01/25/cyberhawk-railway-inspection-completed-using-uavs

Webinar: A UAS Program for Fire & Rescue Services Published: 30 Jan 2017

Aeryon Labs will be running a webinar on Thursday 16th February 2017, in collaboration with the Lancashire Fire and Rescue Service (LFRS), to demonstrate how a UAS program can enhance emergency fire and rescue services. The LFRS UAS program became fully operational in September 2016, using the Aeryon SkyRanger sUAS to respond to situations such as fires, floods, collapsed structures, wildfires and animal rescues. In just four months the Aeryon SkyRanger sUAS had attended more than 70 incidents, including seven fatal road collisions, 29 missing persons, and 34 fire related incidents.

Attend this one-hour webinar session to hear from the team at LFRS as they describe: How they started their UAS program; Their roles and perspectives from pilot to senior management; Their program and community; The applications for UAS in Emergency Response

To find out how UAVs can be used by emergency fire and rescue services, and to join the discussion, register for the webinar here: https://www.aeryon.com/uav-webinars/uas-program-fire-rescue-services

http://www.unmannedsystemstechnology.com/2017/01/webinar-uas-program-fire-rescue-services/

2Feb17

FAA Announces UAV Ban Near Super Bowl.

The AP (2/1) reports that on Wednesday, the FAA announced that certain aircraft, including UAVs, "won't be allowed in the airspace around the Super Bowl on Sunday in Houston." FAA Administrator Michael Huerta said that UAVs "are becoming much more popular, but they also pose certain safety risks."

Chao at Transportation can bring much-needed change on drone policy BY JASON SNEAD, OPINION CONTRIBUTOR - 01/27/17 02:40 PM EST 7

When Elaine L. Chao appeared before the Senate committee considering her nomination to serve as the nation's next secretary of Transportation, she ably fielded questions on issues ranging from the solvency of the Highway Trust Fund to privatizing air traffic control. But one critical topic came up time and again: the Department's approach to revolutionary emerging technologies. Autonomous vehicles may one day virtually eliminate traffic fatalities and congestion. Drones, Chao noted, are "transforming the way we work, the way we do commerce." One American company, Zipline, is using drones to deliver critical medical supplies. Not in America, though; in Rwanda. Another American company, Amazon, just completed its first drone delivery… in the UK.

Why are American companies achieving these historic firsts abroad? The fault lies largely with regulators at the Federal Aviation Administration. The FAA has not kept pace with developments in the industry, and has banned all but the most basic commercial activities until it can catch up. Officials have sought to justify this command-and-control approach on safety grounds. But they exaggerate and misrepresent the harms and risks of drones, and in the process, stoke public fears of aviation disasters. In reality, not a single collision between a drone and a jet airliner has occurred, and little data exists to indicate how serious such a collision might be.

At her hearing, Chao laid out a vision for regulation that sounds quite different from what has been outlined above. "First and foremost, safety will continue to be the primary objective. Regulatory decisions should be rooted in analysis derived from sound science and data, with risk-based analysis… and that considers both the costs and the benefits of new rulemakings." She later called this method "the best way we protect consumers," and asserted that regulators can and should promote safety without "dampen[ing] the basic creativity and innovation" that makes our dynamic, world-leading economy possible. http://thehill.com/blogs/pundits-blog/technology/316549-chao-at-transportation-can-bring-much-needed-change-on-drone

3Feb17

'Bat Bot' Soon to Take to the Skies Robot that flies like a bat to help researchers improve safety of drones   By ELLIE KINCAID Updated Feb. 2, 2017 10:25 a.m. ET

Inspired by nature, researchers have built a robot that swoops and dives like a bat. They say it will aid efforts to understand how bats fly and could offer safety improvements on drones that use helicopter blades. The researchers call their flier Bat Bot—or B2 for short—a recent addition to a family of robots patterned after animals, such as birds and insects.

Unlike the wings of other flying animals, bat wings are "extremely articulated" like human hands, says Bat Bot engineer Alireza Ramezani of the University of Illinois at Urbana-Champaign. The researchers drew from biological studies of bat flight to determine what aspects of the animal's complicated anatomy were essential to re-create in their robot. They simplified the more than 40 joints in bat wings down to nine, with five controlled by tiny motors. Bat Bot bends joints in its wings and swishes its tail from side to side to fly like a bat.

The researchers, who described their project in the journal Science Robotics, then programmed batty maneuvers for their robot. It can fly straight for approximately 30 meters (a meter is 3.3 feet), fold one wing at a time to perform a sweeping turn, and move its legs to take a nose dive like that of a bat going after an insect. A thin silicone-based material stretched as a membrane over the lightweight skeleton mimics the flexibility of bat wings.

"The safety of bat-inspired robots with soft wings is the most significant advantage," says Soon-Jo Chung, a California Institute of Technology professor of aerospace and co-author on the paper. Compared with drones powered by rotating helicopter blades, B2 would be quieter and less dangerous to use around humans, he says. The robot weighs 93 grams (a gram is 0.035 ounces) with a 47-centimeter wingspan, similar in size to the Egyptian fruit bat, Dr. Chung says.

https://www.wsj.com/articles/bat-bot-soon-to-take-to-the-skies-1485975600

DARPA Details OFFensive Swarm-Enabled Tactics UAV Program.

FlightGlobal (2/2) reports that DARPA has released details of its planned OFFensive Swarm-Enabled Tactics (OFFSET) UAV program, for which it will award $14 million for up to two contractors selected to work on the initiative. The program seeks to "leverage" existing gaming industry technologies such as augmented and virtual reality, hardware, and open-source libraries to control swarms of UAVs using "hand gestures, touch or haptic interfaces."

The requirements in DARPA's draft announcement reflect an idea outlined by the US Air Force last fall to use the gaming industry's existing technologies to create a swarming system, and engage the industry in its development.

Forecast: Challenges Have Depressed Demand For Future Small Satellite Launches.

Space News (2/2, Subscription Publication) reports that according to a new "Nano/Microsatellite Market Forecast" published this week by SpaceWorks Enterprises, problems with launches for such satellites over the past two years have reduced the demand for launches. The forecast "projects that up to 2,400 satellites weighing between 1 and 50 kilograms will be seeking a launch from 2017 through 2023," a number "20 percent less than the projection for such satellites seeking launch from 2016 through 2022." The company attributed the drop to "the chronic delays experienced by launch providers and satellite operators."