

22Jan17

Drone Rides <https://www.youtube.com/watch?v=pl2i4KEPQI4>

23Jan17

DJI Terminates Production Of Phantom 4, Phantom 3.

[Aero-News Network](#) (1/21) reported that in a new notice, “DJI has informed its dealers that it is ending production of the Phantom 4” UAV, and “said that the Phantom 3 is also out of production.” The notice comes just 10 months after the introduction of the Phantom 4. An industry analyst said that the company may be counting on the Phantom 4 Pro and Phantom Pro Plus to replace the two UAVs as it shifts focus to a higher-end market.

BMT Develops First UAV Able To Perform Perched Landing.

[Aero-News Network](#) (1/20) reported that BMT Defense Services (BMT) has developed “the very first UAV to perform a perched landing using machine learning algorithms.” The project had the goal of “extending the operation of current fixed wing UAVs by introducing morphing wing structures inspired by those found in birds.” The wing structures are controlled by machine learning to coordinate the “perched” landing. The project was developed through a partnership between BMT and the University of Bristol as part a Defense Science and Technology Laboratory (DSTL) program.

24Jan17

Some Say Military Could Save Money By Modifying Commercial UAVs.

[Wired](#) (1/23) reports that according to some experts, the US military could save money and research time by purchasing civilian UAVs already available on the market and modifying them for scouting missions. While the military does have some smaller UAVs, including Ravens and Pumas, their “biggest limitation” is that they are designed to fly outside, and not within building interiors; the civilian market, however, already offers UAVs capable of indoor flight. While Major Jeffrey Persons, head of the Aviation Combat Element Branch for the US Marine Corps Warfighting Laboratory said that “commercial drones still aren’t quite ready for military action,” the Center for a New American Security’s 20YY Warfare Initiative Project Director Paul Scharre said that technology that will make them ready for military use is “right around the corner.”

High-Altitude UAV Helping FAA Test Surveillance Of Commercial Spacecraft.

[SPACE](#) (1/23) reports that a high-altitude UAV that deploys from a stratospheric balloon is helping the FAA “test new technologies for surveillance of commercial spacecraft in national airspace.” In an October 3 test, funded by NASA for its “Flight Opportunities” program, Near Space Corporation’s “High Altitude Shuttle System” (HASS) carried a “special payload of FAA technologies” for the agency to test “how a winged spacecraft would enter Class A-controlled airspace.” NASA Flight Opportunities Campaign Manager Paul De Leon said, “Flight testing and advancing technologies needed by the FAA to allow detection and surveillance of future spacecraft while entering the national airspace is crucial for the Flight Opportunities program.”

Drone bills not yet ready to take off in House of Delegates Alex Rohr

RICHMOND — It’s not only peeping Toms who may use aerial remote-piloted drones to violate privacy but also criminal scouts and corporate saboteurs, according to state legislators trying to regulate the developing technology.

After determining the three bills its members heard Monday trying to regulate flying recreational drones were not yet ready, a House of Delegates Courts of Justice Committee subcommittee created a work group to be led by Del. David B. Albo, R-Fairfax. The bills either are under construction or under negotiation.

Del. Robert B. Bell, R-Albemarle, the Criminal Justice subcommittee chairman, showed frustration that drone regulation has been under negotiation for four or five years while complaints from constituents continue that drones are used to invade personal privacy. "I'm embarrassed that we haven't fixed it yet," Bell said, adding the holdup was because some stakeholders were content with the status quo.

Patrick Cushing, representing Unmanned Systems Association of Virginia, a trade group for businesses interested in drone technology, said the state legislature should wait for developments from the Federal Aviation Administration. The FAA passed drone-related regulations that went into effect in August, including a requirement the drone remain within the remote pilot's eyesight. "It's really the FAA that's taken a lead, and we need to let the FAA do what they're going to do before we do what we do," said Cushing, who signed up for the work group to make sure "the industry has a voice" in the decision-making process.

http://www.newsadvance.com/news/local/drone-bills-not-yet-ready-to-take-off-in-house/article_44757b3e-e1d6-11e6-bf28-9b3cfdc7f7d1.html

FAA Uses UAS to Test New Technology for Tracking Commercial Spacecraft Entering Airspace By AUVSI News posted yesterday

The FAA has announced that back in October 2016, it used a UAS to test its new surveillance technology, to see if the technology is capable of detecting and tracking commercial spacecraft entering the National Air Space. The flight was conducted by the Near Space Corporation (NSC).

During the test, which took place in Tillamook, Oregon, a stratospheric balloon carried a High Altitude Shuttle System (HASS) UAS 70,000 feet in the air before releasing it. Once released, the UAS, equipped with a payload built to detect and track commercial spacecraft, embarked on a semiautonomous glide flight that simulated how a winged spacecraft would enter into Class A-controlled airspace.

Using its new surveillance technology onboard the UAS, the FAA tracked the HASS UAS from the Seattle Air Traffic Control Center. It took the UAS approximately 30 minutes to return back to its launch site.

Via a NASA press release, Flight Opportunities campaign manager Paul De Leon says, "flight testing and advancing technologies needed by the FAA to allow detection and surveillance of future spacecraft while entering the national airspace is crucial for the Flight Opportunities program." The flight was conducted under the first FAA UAS test site for UAS high-altitude Certificate of Authorization (COA). For the NSC, it became the first commercial suborbital space company to do a flight test under the FAA's new UAS rules, which were passed in August 2016.

<http://www.auvsi.org/blogs/auvsi-news/2017/01/23/faa-uses-uas-to-test-new-technology-for-tracking-commercial-spacecraft-entering-airspace>

Osprey to Provide Airspace Integration Assessment for Airbus Zephyr-S UAS Published: 18 Jan 2017

Osprey CSL has announced that it has been awarded a contract by Airbus to provide a safe separation assessment of the Zephyr-S unmanned aircraft. Referred to as a High Altitude Pseudo Satellite (HAPS), Zephyr-S is the latest design in Airbus' series of ultra-lightweight unmanned aircraft systems (UAS). Solar powered, it is capable of flying and operating up to twice the altitude of commercial aircraft and with mission endurance of greater than a month, it performs more like a satellite than a conventional UAS.

Osprey will develop the strategy for the safe airspace integration of Zephyr-S and contribute to the overall system safety case. This represents unique, significant and cutting edge challenges from an airspace and safety perspective. These challenges will be overcome to ensure that Zephyr-S can be inserted into international airspace, including that used by manned aviation, safely and effectively.

<http://www.unmannedsystemstechnology.com/2017/01/osprey-provide-airspace-integration-assessment-airbus-zephyr-s-uas/>

25Jan17

Drones + Augmented Reality = Help for Firefighters

By Ed Darack AIRSPACEMAG.COM, JANUARY 20, 2017

ScanEagles soar over active fires, while viewers explore the scene using holograms.

The Boeing subsidiary Insitu is looking at a new way to help fight wildfires by combining its ScanEagle drone with another hot technology, augmented reality. The system dramatically increases firefighters' understanding of a blaze by showing data streamed real-time from the ScanEagle as it flies above the fire. The real-time imagery is combined with a high-resolution digital terrain model and other data, and displayed to a viewer wearing Microsoft's HoloLens glasses. The drone can loiter over a fire for up to **24 hours**, letting a viewer keep constant watch over the fire and track its development.

Not only do the images show flames and embers invisible to the naked eye (that can catch unknowing firefighters off guard), the system is able to "see through" overgrowth and brush thanks to a thermal infrared scanner that detects variations in temperature, day or night. The HoloLens glasses show the viewer a three-dimensional hologram of the fire with all key elements of the scene clearly identified. The wearer can even control the ScanEagle using the system, and eventually will be able to control an entire fleet of drones. Microsoft is among those working on gaze control, whereby drone operators control the vehicles simply by looking around the AR scene and re-directing their eyes.

<http://www.airspacemag.com/articles/drones-augment-reality-180961874/>

Drone Hacking Made Easy

Nice drone...shame if something were to happen to it.

By Ed Darack, AIRSPACEMAG.COM, NOVEMBER 9, 2016

Hacking is in the news a lot these days, but it seemingly hasn't occurred to most drone owners just how susceptible their flying machines are. I saw this firsthand at a military base in California, where a Marine Corps infantry officer (who requested anonymity) described plans for his unit's next exercise. Their higher command, he'd learned, was thinking of purchasing off-the-shelf quadcopter drones to watch the Marines in real-time and direct simulated bad guys to ambush them. But the officer wasn't worried—he explained that he could easily hack the drones if he wanted and cause them to crash, or land, or just take them over completely. It was simple.

He planned to follow recently published procedures to get in through the drones' standard Wi-Fi protocol link and inject code into their control systems. To do that, hackers need to create a "cantenna" that focuses their signal onto the drone and drowns out the owner's signal. Once connected, the hacker can use a Raspberry Pi (or similar homebrewed computer) with a smartphone or tablet to complete the hack. And that's all. One Wi-Fi drone hacker even devised a system where a drone could hack a number of other drones on its own.

<http://www.airspacemag.com/airspacemag/drone-hacking-made-easy-180961052/>

26Jan17

No news today, but here's some interesting old news...

Drone Deliveries Go Global

China introduces rural service, with other countries not far behind.

By Ed Darack AIRSPACEMAG.COM, NOVEMBER 21, 2016

Chinese e-commerce giant JD.com just began delivering products by drone to customers outside Beijing and in the provinces of Shaanxi, Sichuan, and Jiangsu. The drone deliveries, which began on Singles' Day with JD.com's fleet of 30 Y-6 multirotor aircraft, mark a first for the Beijing region. The Singles' Day rollout is the latest step in the company's planned expansion of drone delivery service, possibly nationwide to both rural and urban areas, in the not-too-distant future.

Interest in drone delivery isn't limited to China, of course. In March, DHL concluded a three-month trial using its Parcelcopter 3.0 to make flights to a remote Bavarian mountain village. The completely autonomous Parcelcopter, which required special governmental permission to fly, made several flights per week to the village. Meanwhile, the United Kingdom, Switzerland, and other European countries have hosted or will host trials of their own.

The United States isn't far behind in this new way of shipping. WalMart, which this year announced its planned deployment of drones for warehouse inventory management, is serious about product delivery drones, as are Google and Amazon.com. Just a few weeks ago, UPS began real-world flight tests of its drone, delivering an inhaler to Children's Island, near Boston, Massachusetts. Not long before that, 7-11 made history in Reno, Nevada, with the first (legal) home delivery of goods by drone in the United States. The two flights delivered hot and cold food.

<http://www.airspacemag.com/daily-planet/drone-deliveries-china-and-soon-world-180961160/>

27Jan17

Kratos To Demonstrate Its Swarming Combat UAVs.

[Aviation Week](#) (1/26) reports that Kratos Defense President and CEO Eric DeMarco said that the California-based company "will show off its autonomous combat UAV during a military exercise later this year."

Tempe Councilmen Considering UAV Restrictions.

The [Arizona Republic](#) (1/26) reports that Tempe Councilman Joel Navarro is leading an effort to determine whether more UAV rules are needed to make the city safer. According to the paper, Navarro and Councilman Randy Keating have spent about a year researching the issue and plan to report their findings to the City Council.