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Northern Plains Test Site Authorization Could Positively Impact Future Of UAV Adoption.

[Space War](#) (3/17) reported that the FAA's decision earlier this year to grant North Dakota's Northern Plains UAV Test Site authorization to **conduct beyond-visual-line-of-sight operations** for UAVs could help "bring civilian agencies and commercial companies one step closer to greater UAS usage." The FAA's approval provides organizations like NASA and Northrop Grumman with the "ability to test and evaluate complex UAS operations that weren't previously possible," while also putting "North Dakota at the forefront of aviation and UAS research."

US Army Training UAV Pilots Alongside Counter-UAV Operations.

[C4ISR & Networks](#) (3/17) reported that in a "first-of-its-kind multi-domain training lane," the US Army is training small UAV operators alongside the counter-UAV operations to familiarize the soldiers with how to respond to electronic attacks. Chief Warrant Officer 4 Samuel Kleinbeck, Division UAS at Fort Riley, said that the two opposing operations "run hand in hand." The operators are being trained on the RQ-11 Raven and the RQ-20 Puma, while future training could integrate quadcopters.

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AOPA Has Welcomed 55 UAV Pilots Since Offering Membership.

The [AP](#) (3/20) reports that since the Aircraft Owners and Pilots Association (AOPA) opened membership to UAV pilots on February 21, 55 have joined the organization and thousands of its existing members have opted in to receive UAV-related content and newsletters. AOPA's decision to extend membership to UAV pilots followed the FAA's introduction of commercial UAV licenses. Kathleen Swain, AOPA senior director of UAS, said that one of the organization's top priorities will be tracking how regulation keeps pace with advances in technology.

[FAA forecasts 442,000 commercial UAS by 2021](#)

An aviation industry forecast released today by the FAA projects the commercial UAS fleet in the United States to grow from 42,000 to 442,000 in the next five years. Remote Pilot Licenses are also expected to increase from 20,000 to a range of 10 to 20 times during the same time. The data in the FAA study began at the end 2016. The FAA said the forecasts contain "certain broad assumptions" about the current and evolving regulatory environment for UAS. The annual FAA Aerospace Forecasts project sustained and continued growth in nearly every aspect of air transportation, from general aviation private flying to large commercial airline passenger levels.

Amazon Prime Air delivery drone drops off sunscreen during semi-public U.S. debut BY [ALAN BOYLE](#) March 20, 2017



Amazon's Prime Air drone [made its first package delivery in December](#), in England, but regular folks haven't seen it in action out in the open here in the States. Until today.

The drone demonstrated its delivery technique during Amazon's MARS 2017 conference at a resort in Palm Springs, Calif. The merchandise? A box containing sunscreen for the sunny California weather, of course.

Amazon has been providing glimpses of its prototype drones for well more than a year, and the testing continues in the U.S. and Britain as well as other countries. However, the previous peeks we've gotten have been [professionally packaged videos](#), created by Amazon.

In contrast, today's video was basically a smartphone clip shot by [Jason Johnson](#), who's the founder and CEO of August Home (and an attendee at MARS 2017).

<http://www.geekwire.com/2017/amazon-prime-air-delivery-drone-mars/>

Researchers develop a drone that swoops and lands like a bird

One day they may be able to help with fires or deliver packages.

[Stefanie Fogel](#), [@stefaniefogel](#)

03.20.17 in [Robots](#)



Watch out, birds. The drones are coming for your jobs. Researchers at BMT Defence Services (BMT) and the University of Bristol in Britain have built a fixed-wing UAV that can land as well as its avian counterparts, reports [Popular Mechanics](#). Although BMT's project is currently part of a wider defense program called Autonomous Systems Underpinning Research, the team believes their drone could one day be used for other tasks like putting out fires or [delivering packages](#).

When birds land, they perform a "deep stall," meaning they swoop in at low altitude and angle their wings upward before landing. BMT's drone does this too, thanks to a new morphing wing that can sweep forwards and backwards to create a pitching moment, or twist to allow the aircraft to roll. With this kind of high maneuverability, researchers envision a future where UAVs can easily fly through urban environments, dodging lampposts and power lines.

But, it takes more than high-tech wings for a drone to safely do a deep stall. The team also had to build it a bird-like brain, one that could compensate for slight changes in speed, wind, angle and wing position. They achieved this through something called "Q-learning," a technique where an artificial intelligence learns an optimal course of action by raising its "Q," or satisfaction level. Like a kid in an arcade, it kept trying to beat its high score, until it worked out how to get from its starting point to its destination. After about 5,000 practice attempts, BMT says the drone pulled off a soft landing without a runway. <https://www.engadget.com/2017/03/20/drone-lands-like-bird/>

AutoModality's Wins \$1 Million Grand Prize in Genius NY Business Competition for Unmanned Systems By [AUVSI News](#)



A seven judge panel has awarded the [\\$1 million grand prize in the Genius NY business competition to AutoModality](#). The money will be used to hire new employees, according to AutoModality's chief technology officer and one of its three principals Ed Koch.

AutoModality's UAS can get within three feet of objects to conduct up close inspections of buildings, bridges, power lines and other structures. Instead of using GPS, computerized optics are used to control the movements of the UAS, helping them avoid collisions with other objects.

A second-place prize of \$600,000 was awarded to a company called Ascent AeroSystems, which make UAS that can be carried in backpacks. A third-place prize of \$400,000 was awarded to a company called OmniMesh, which is designing a wireless network protocol that is meant to increase UAS safety and security. Three runner ups received prizes of \$250,000 each.

New York's economic development arm, Empire State Development, provided \$5 million in funding to Genius NY for the competition. They will provide \$5 million again next year to once again fund the competition. <http://www.auvsi.org/blogs/auvsi-news/2017/03/16/automodalities-wins-1-million-grand-prize-in-genius-ny-business-competition-for-unmanned-systems>

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NASA's Green Outlines Vision For Smallsat Missions.

[BBC News \(UK\)](#) (3/22) reports that at the Lunar and Planetary Science Conference in Texas, NASA Director of Planetary Science James Green said in an interview that the agency is examining "an array of ideas" for using small satellites for planetary science missions. He foresees the smallsats being used for targeted investigations to complement main missions – an approach that the agency will test through its Insight mission to Mars, which includes two smallsats. He also said that NASA could consider deploying stand-alone constellations of smallsats. Green added, "We're thinking about some other cubesat concepts, not only at Mars, but at the Moon, at asteroids, at Venus." Last year, the agency selected 10 smallsat missions for funding out of a pool of 102 proposals.

FAA Official: Agency Working To Craft Rules On UAV Data Collection.

[Aero-News Network](#) (3/21) reports that during a hearing of the Senate Committee on Commerce, Science and Transportation, FAA Office of Unmanned Aircraft Director Earl Lawrence said that the agency is working with the Drone Advisory Committee to craft rules governing data collection by commercial UAVs. He noted that the agency to this point has not implemented any rules to address privacy concerns stemming from commercial UAV operation. Senator Edward Markey (D-MA) raised concern that "there are no safeguards in place," but UCLA Professor John Villasenor cautioned Congress against legislating sweeping regulations restricting unmanned aircraft.

York County lands drone firm DroniCar By Tara Bozick

York County would like to attract more drone businesses now that DroniCar Inc. set up its headquarters in Tabb. Founder and CEO Yeonjoon "Ethan" Park said he wanted to venture out from the world of research to become part of an emerging drone industry.

As Federal Aviation Administration policy began opening the doors for commercial drones, Park, who lives in Tabb, said he and three partners launched DroniCar in September with the firm moving into the Ocean Storage building near Route 17 and Coventry Boulevard in December. DroniCar has three employees, including two Christopher Newport University students who have an interest in unmanned aerial vehicles.

Park worked for 12 years — most recently with the National Institute of Aerospace — as a research scientist at NASA Langley Research Center. There he helped to develop a prototype for a solar-powered heavy cargo airship drone with funding from the Department of Transportation in 2011.

"We want to develop Hampton Roads to be the Silicon Valley of UAVs and drones," Park said.

Daniel Morris, executive director of the Peninsula Technology Incubator in Hampton, wants the region to become a hotbed for developing drone technology. He said the incubator is working with 12 drone-related firms, primarily startups, and specifically helps researchers gain business insight. "I think we have the highest potential in the state, quite frankly, for developing the industry," Morris said. "We've got such a dense concentration of resources, assets, talents and intellectual capital." <http://www.dailypress.com/business/tidewater/dp-tidewaterbiz-dronicar-20170321-story.html>

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DARPA Preparing For Future Threat Of Autonomous UAV Bombers.

The [Washington Post](#) (3/22) reports that in the coming weeks, DARPA plans to award contracts for the first three phases of testing and research for its Mobile Force Protection Program, which seeks solutions to counter the threat of autonomous UAV bombers. While the aircraft – which would be equipped with explosives to detonate on impact – have not yet appeared in combat, the threat of their arrival poses a more “complex problem” for the military than the Islamic State’s current radio-controlled UAVs because the autonomous versions would be pre-programmed with a target, removing the need for radio signals that counter-UAV systems can detect. Each company chosen for the contracts will receive about \$3 million, and Phase 1 could begin by May.

Georgia Lawmaker Expects UAV Legislation To Pass State Senate.

The [Atlanta Journal-Constitution](#) (3/22) reports that Georgia House Transportation Chairman Kevin Tanner said that he expects passage of his bill that would prohibit local governments from enacting UAV regulations “on top of state law.” Former Georgia Secretary of State Lewis Massey, a member of the commission appointed by Gov. Deal to “propose state-level guidelines until the new FAA regulations are released,” said that the bill is designed to attract companies seeking to use UAVs.

Unmanned systems' importance elevated at annual Hampton technology event [By Nate Delesline III nate.delesline@insidebiz.com](mailto:nate.delesline@insidebiz.com) Mar 21, 2017



Hailing an autonomous car or aircraft ride could one day be as common as requesting a ride from Lyft or Uber. “Think about if you have an elderly father and mother and they’re living alone, just the amount of mobility that will give them to be able to hop in a car in a safe way and get somewhere,” said Daniel Morris, executive director of the Peninsula Technology Incubator. “Just that alone will be life changing.”

Unmanned systems workforce development, along with strategies and opportunities to advance the commercialization of technology, exhibits and networking opportunities will be part of the Hampton Roads Unmanned Systems Opportunity Exchange. The free public event is set for April 20 to 21 at the Hampton Roads Convention Center in Hampton. Karen Jackson, Virginia’s secretary of technology, is the keynote speaker. Andy Schaudt, project director for the Center for Automated Vehicle Systems at Virginia Tech, is the lunch speaker April 20. Dan Stilwell is the lunch speaker April 21. He leads Virginia Tech’s DEEP-X team in the Shell Ocean Discovery XPRIZE competition.

“There’s a huge amount of opportunity for young folks to jump into the industry,” Morris said. Opportunities encompass everything from flight to maintenance and cybersecurity. Morris said this is the second time the event, which is now in its fourth year, has focused on unmanned systems.

The drone industry is in the same spot as the cellphone industry was in the 1980s, Morris said. “Right now, the drones that you see that are flying around and the unmanned vehicles on the ground are like the brick telephone currently. ... It took almost 20 years to get to the iPhone, but I think you’re going to see much more accelerated development” in unmanned systems.

http://pilotonline.com/inside-business/news/continuing-education-work-development/unmanned-systems-importance-elevated-at-annual-hampton-technology-event/article_9eae7168-1fe8-536e-8985-b7b5199f5f70.html?spMailingID=10672734&spUserID=NjM0NzcxNjYwNTkS1&spJobID=1121778545&spReportId=MTEyMTc3ODU0NQS2#utm_source=pilotonline.com&utm_campaign=%2Fnewsletters%2Finside-business%2Fthursday%2F&utm_medium=email&utm_content=read%20more

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Records Show FAA Has Granted 314 Special-Use Permits For UAV Flights.

[USA Today](#) (3/23) reports that since the agency issued its new comprehensive rules for UAVs last year, the FAA has granted 314 special permits, including – with some overlap – 306 for flying at night, 11 for flying multiple UAVs at once, three for flying beyond-line-of-sight, and several for other situations. Association for Unmanned Vehicle Systems International (AUVSI) CEO Brian Wynne said that the numbers show the expanding applications for UAVs, and underscore the need for the FAA

to issue new regulations allowing flights in such circumstances without special permits. He claimed that doing so would benefit the economy.

Drones that will change our lives forever

See the list: <https://www.lovemoney.com/gallerylist/62560/drones-that-will-change-our-lives-forever>

