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## **Santa Delivered the Drone. But Not the Safety and Skill to Fly Them.** By CAROL POGASHJAN. 8, 2017

If this Christmas was the season of the drone, it was also a time of crashes, losses and tweeted laments. Social media is rich with commentary about fathers (major targets) crashing drones, girlfriends with tiny blades enmeshed in their hair (mothers removed them) and crying children whose favorite present went poof in the sky.

My brother got a drone this morning and he flew it at a park and the wind carried it off and he lost it. Merry Christmas.

“How would you like it if your laptop flew away?” Shelley Holloway’s husband asked her after he lost his holiday drone. Ms. Holloway, of Clawson, Mich., had posted a note on Nextdoor, the community-based social network, saying that “his Christmas has been ruined ever since.” (Apparently he didn’t like the ribbing.)

Most drones are harmless toys — albeit ones that seem to have a shorter shelf life than a Christmas tree. But drones, particularly bigger ones, can cause major damage and injury, especially in the hands of neophytes. Like birds, drones can be sucked into engines, creating a risk of planes being brought down. There is also a risk of drones themselves falling on people or their property. The Federal Aviation Administration requires that every hobby drone owner register with the agency, and insurance companies are girding for a wave of drone-related accident claims.

<http://www.nytimes.com/2017/01/08/business/drone-safety-risk-popular.html?hp&action=click&pgtype=Homepage&clickSource=story-heading&module=second-column-region&region=top-news&WT.nav=top-news>

Falcons, Drones,

## **A Winery Battles Climate Change**

**Jackson Family Wines is among California winemakers employing both high-tech and old-school techniques to adapt to hotter, drier conditions.**

By DAVID GELLESJAN. 5, 2017

The Jacksons are also monitoring their crops using drones equipped with sensors that detect moisture by evaluating the colors of vegetation. The wrong color can indicate nutritional deficiencies in the crops, or irrigation leaks.

“Previously, it would require an experienced winemaker to go and look at the grapes,” said Clint Fereday, the company’s director of aviation. “Now we can run a drone, tag an area of the vines with GPS, and go right to the spot that has a problem.”

The drones have other uses, too. An infrared camera can scan for people guarding illicit marijuana operations on nearby lands.

<http://www.nytimes.com/2017/01/05/business/california-wine-climate-change.html?ref=business>

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## **DARPA Demonstrates Record Endurance Of Vanilla Aircraft’s VA001 UAV.**

[Airforce Technology](#) (1/6) reported that the Defense Advanced Research Projects Agency (DARPA) took Vanilla Aircraft’s VA001 for a 56-hour test flight, the “world duration record for combustion-powered UAVs in the 50kg to 500kg subclass.” DARPA Program Manager Jean-Charles Ledé said the test, which took place from November 30 to December 2, “demonstrated the feasibility of designing a low-cost UAV able to take off from one side of a continent, fly to the other, perform its duties for a week, and come back, all on the same tank of fuel.”

## **UVify Draco HD UAV “Star” Of “Drone Rodeo” At CES.**

[Engadget](#) (1/6) reported that the “star” of the annual “Drone Rodeo” that took place just off-site from the Consumer Electronics Show (CES) this year “was undoubtedly UVify” with its Draco HD racing UAV, which was demoed to the media for the first time at the event. Engadget explained that “a much crisper, larger” 720p video feed, sent to the

Avegant Glyph headset, set the model apart, providing a “sensation of soaring like a bird.” Other models at CES included Epson’s BT-300 and Sculpteo’s 3-D printing technology for printing replacement parts.

## **Many UAV Buyers Surprised By Devices’ Power.**

The [New York Times](#) (1/8, Subscription Publication) reports that with 2.8 million UAVs sold in the US in 2016, many consumers “were surprised by the power of their machines,” according to FAA UAV advisory board member Juan J. Alonso, a professor of aeronautics and astronautics at Stanford University. With the popularity of UAVs continuing to increase, “insurance companies are girding for a wave of drone-related accident claims,” the article notes.

## **FAA Announces More Than 600,000 UAVs Registered In 2016.**

[Fortune](#) (1/6) reported that the FAA revealed Friday that people “registered over 670,000 drones” with the agency in 2016. FAA Administrator Michael Huerta made the announcement at the Consumer Electronics Show in Las Vegas. Huerta explained that the agency “projects that nearly 7 million drones may be sold in the US by 2020.” The registration system began in December 2015. The [Aero-News Network](#) (1/7) reported that Huerta also commented on the agency’s integration of UAVs into the national airspace, but offered “nothing new in his remarks.”

## **FAA Says It Has Received More Than 100 Complaints Per Month From Pilots About UAVs.**

The [New York Times](#) (1/8, Subscription Publication) reports that an FAA spokesman said that the agency “receives more than 100 reports a month from pilots who complain that drones have flown too close to their aircraft.” The Times adds that the agency has created an app called B4UFLy and posted tips to its website in order to ensure that all UAV operators are aware of the rules and regulations when flying the devices.

## **UAV Collides With Boeing 737 In Mozambique.**

[Fortune](#) (1/8) reports that the airline Linhas Aéreas de Moçambique announced that “one of its Boeing 737 jets collided with” a UAV on January 5, causing “major damage to the plane’s nose,” but no passenger injuries. Inspections after the incident indicated that the plane collided with “something bigger than a consumer-grade quadcopter.” The article notes that “the FAA has implemented comprehensive drone regulations” in the US to help prevent such incidents

## **Incredible Drone Footage Of The Long Lost Nubian Pyramids**

When you hear the word pyramid, you probably think about ancient Egyptian pyramids or Mesoamerican pyramids towering high over the jungle canopy. There are some 3,000 year old pyramids in Northern Sudan, and National Geographic Engineer Alan Turchik set out to show the whole world their beauty.

The pyramids even to this day are somewhat of a mystery. There are some theories but no one really knows how they were built, who built them, or why. Adding to the mystery is the mathematical precision and astronomical significance of the structures. Thousands of years of erosion have taken their toll, but the structures still stand in remarkable condition. Check out the awesome aerial footage Turchik was able to capture. <http://www.higherperspectives.com/incredible-drone-footage-of-the-long-lost-nubian-pyramids-1406176858.html>

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## **Want to become a drone pilot? Get your FAA certification soon in Norfolk** By Eric Hartley, The Virginian-Pilot, Dec 20, 2016

Until recently, a small building in Norfolk’s Barraud Park was home to the city’s boxing center. Beginning next month, it will host classes for future drone pilots. The city and a trade school are teaming to offer the training starting mid-January. The six-week classes will prepare students to get Federal Aviation Administration certification as drone operators.

It's a quickly growing field, with commercial drones – or “unmanned aircraft systems” – rapidly getting cheaper and smaller. The FAA unveiled its certification rules and test in August, and those in the industry expect tens of thousands of new drone pilots and maintenance technicians to be needed in the next few years. “This is where jobs that don't exist today are going to be,” said Joel English, a vice president of the Aviation Institute of Maintenance, which will run the classes.

Norfolk is calling its pilot program – thought to be the first of its kind in Hampton Roads – “Fly Norfolk.”

[http://pilotonline.com/business/jobs/want-to-become-a-drone-pilot-get-your-faa-certification/article\\_670910bf-5d83-55b1-a673-4ef557e26115.html?utm\\_source=Newsletter&utm\\_medium=email&utm\\_content=This+month+s+top+stories&utm\\_campaign=Top+Stories+Actives](http://pilotonline.com/business/jobs/want-to-become-a-drone-pilot-get-your-faa-certification/article_670910bf-5d83-55b1-a673-4ef557e26115.html?utm_source=Newsletter&utm_medium=email&utm_content=This+month+s+top+stories&utm_campaign=Top+Stories+Actives)

## **DOD Press Release Announces Successful Test Of “Swarming” Perdix UAVs.**

[FlightGlobal](#) (1/9) reports that a DOD press release distributed on Monday announced that last October the department's Strategic Capabilities unit conducted “one of the largest successful demonstrations of swarming micro-drones,” launching 103 “palm-sized” Perdix UAVs from three F/A-18 Super Hornets over the US Naval Air Systems Command's testing grounds in California. The expendable UAVs, developed with MIT's Lincoln Laboratory, displayed “collective decision-making, self healing and adaptive formation flying,” according to the press release. **Impressive!**

## **Yuneec Unveils Six-Rotor H520 Commercial UAV.**

[Shephard Media](#) (1/9) reports that “Yuneec International has unveiled a new six-rotor UAV called the H520, developed for the commercial and industrial markets.” The H520 features an emergency flight capability with only five rotors; three camera options, including a dual thermal model; retractable landing gear for unobstructed camera views; Intel RealSense Technology for avoiding objects; “the Android-based ST16 controller, which has a large integrated display and HD 720p video downlink for real-time video reception, and an HDMI uplink for distribution to external monitors.”

## **Parrot Cutting A Third Of Its UAV Staff.**

[MarketWatch](#) (1/9) reports that Parrot, “which makes the Bebop consumer drone, announced Monday” that it plans to lay off 290 of the 840 employees in its UAV division and shift “its focus to the commercial segment” of the UAV market. The news follows Parrot's fourth-quarter earnings falling below expectations. The maker of the “Bebop” consumer UAV joins a growing list of UAV makers – including GoPro and 3D Robotics – that recently have announced layoffs

## **South Dakota Lawmakers To Consider Exempting Some UAVs From Registration.**

The [AP](#) (1/9) reports that South Dakota lawmakers are set to examine a bill that proposes to exempt unmanned aircraft from state registration requirements. Introduced at the request of the state's Department of Transportation, the legislation “would excuse the owners of drones weighing less than 55 pounds from being required to register.” South Dakota Department of Transportation Secretary Darin Bergquist explained that “the legislation raises the question of whether the state's registration laws were meant to cover drones and require redundant registration.”

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## **Qualcomm Showcases UAV Technology Capable Of “Machine Learning.”**

[Business Insider](#) (1/10) reports that Qualcomm recently showcased a new iteration of its Snapdragon Flight Drone Program featuring “technology that enables drones to learn about the environment around them while they're in the air.” The technology uses “machine learning” to detect obstacles and automatically create alternate routes, which “could enable drones to conduct services in places they have not yet been.” However, FAA regulations, which currently require a UAV to be within an operator's line-of-sight, “could prevent this technology from being deployed commercially anytime soon.”

## **JAXA Postpones Launch Of Mini SS-520 Rocket Due To Wind.**

[Reuters](#) (1/11) reports that on Wednesday, JAXA postponed the launch its SS-520 rocket due to high winds at the Uchinoura Space Center. The rocket, “which media has called the world’s smallest space rocket, will carry a 3-kg (6.6 lb), 35-centimetre (14 inches) satellite, which will take images of the earth and gather other data.” JAXA “has not decided when it would try to launch the rocket again.”

## **Graves Says Congress Will Debate UAV Rules, FAA Air Traffic Controllers.**

[USA Today](#) (1/10) reports that Rep. Sam Graves (R-MO) said Tuesday that “Congress will debate new rules for remote-controlled aircraft and cars this year,” and “told the Aero Club that the key is to find a compromise that ensures drones and autonomous cars travel safely, without hindering innovation in the fast-changing technology.” Graves also said that Congress will debate again during the spring whether to shift air-traffic controllers from the FAA “to a private company for more stable industry funding.” The article notes that Graves “invited suggestions” at his meeting with the Aero Club “for how the [air-traffic control] system should work, and how drones should be regulated within that arrangement.”

## **Washington State Lawmakers Considering UAV Trespassing Bill.**

On its website, [KOMO-TV](#) Seattle (1/10) reports that state lawmakers in Washington are considering a bill that would criminalize some UAV activity over private property to prevent potential harassment. If an “operator is hovering 300 feet or less over private property and taking pictures without that property owner’s permission,” House Bill 1049 would designate such activity a trespassing crime, according to the bill’s sponsor, Rep. Jeff Morris (D).

## **FAA Authorizes Another Local Police Department To Use UAVs.**

The [Atlanta Journal-Constitution](#) (1/10) reports that the FAA has authorized the Duluth Police Department to use UAVs “for official police activity.” Duluth would become the “second police department” in Gwinett County, GA to receive such permission. The department’s UAVs will “have high-definition cameras, forward-looking infrared capabilities and both ‘daytime and nighttime abilities,’” according to a department statement, which added that “there will be one drone-trained officer on every police shift in case it is necessary to use one.”

## **FAA Administrator Michael Huerta Reviews Successful 2016 for UAS Industry** By AUVSI News posted 4 days ago

FAA Administrator Michael Huerta held a press conference on Friday, Jan. 6 at CES 2017 to recap a successful year for the unmanned systems industry, and preview 2017. Among the many accomplishments that Huerta acknowledged during his press conference was the passing of the small UAS rule in August 2016, and the statistics associated with the rule since its passing.

In the four months since the passing of the small UAS rule, more than 30,000 people have started the remote pilot application process, and about 16,000 of those people have taken the remote pilot knowledge exam, with almost a 90 percent pass rate. Another significant achievement that Huerta acknowledged was the establishment of the drone advisory committee. According to Huerta, the committee allows the FAA to look at UAS use from every angle, while considering the different viewpoints and needs of members of the committee, which includes representatives from industry, government, labor and academia. AUVSI President and CEO Brian Wynne is a member of the group.

The final major accomplishment that Huerta highlighted during his press conference was the FAA’s holding of the first Unmanned Aircraft Symposium, which Huerta described as the “ultimate exercise in democracy.” “Our challenge is to find the right balance where safety and innovation coexist on relatively equal plains,” Huerta says. “And I don’t think it’s an exaggeration to say that we’ve accomplished a lot in the last year as we’ve moved towards this goal, then we have done many previous years before it.”

<http://www.auvsi.org/blogs/auvsi-news/2017/01/06/faa-administrator-michael-huerta-reviews-successful-2016-for-uas-industry>

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## **Huerta: FAA Likely To Draft Rule Allowing Commercial UAVs To Fly Beyond Line-Of-Sight.**

[Bloomberg BNA](#) (1/11) reports that it was told by FAA Administrator Michael Huerta on January 6 that the agency “will likely draft a rule allowing commercial drones to fly beyond an operator’s line of sight after the agency finishes its draft rule for flights over people.” Bloomberg BNA adds that “Huerta would not give a new timeline for that regulation, but said it is still slated to be issued first.”

## **Senator Duckworth Reveals What Led Her To Become A Strong Proponent Of UAV Safety.**

[Vox](#) (1/11) reports that the “most revealing moment” in Elaine Chao’s confirmation hearing to become Secretary of Transportation came when Sen. Tammy Duckworth (D-IL) “described the time a drone almost got her killed” while she was flying a plane at 2,500 feet. Duckworth said this incident influenced her to become a strong proponent of UAV safety and, according to Vox, “was a vivid reminder of the very high stakes in drone regulation.” Vox adds that a lot of people at the hearing agreed that the FAA “needs to protect safety without unduly stifling innovation, but Duckworth’s anecdote helped to make the abstract concept of safety very concrete.”

## **Orlando, don't limit drones for business use** Brian Wynne, Guest columnist

Unmanned aircraft systems, commonly called drones, are becoming more and more popular for recreational purposes as well as for transforming the way that industries from construction to agriculture operate. Even as more companies in the Orlando area are adopting drones for their businesses, recent actions by the Orlando City Council could limit opportunities for them to take full advantage of this technology.

My organization, the Association for Unmanned Vehicle Systems International, represents nearly 400 companies and individuals in Florida that are already using drones in their work. If the Orlando City Council passes Ordinance 2016-87 when it meets on Monday, however, their ability to conduct day-to-day operations will be severely restricted, and jobs will be put at risk.

The industry supports the safe, non-intrusive use of drone technology. The Federal Aviation Administration’s small-drone rule, which went into effect on Aug. 29, allows for commercial drone operations below 400 feet and within line of sight of the operator. However, the ordinance proposed by the Orlando City Council will only cause confusion for drone operators in the wake of new federal rules about where and how they can and cannot fly. The U.S. Code makes it clear: “The United States Government has exclusive sovereignty of airspace of the United States.”

A study by my trade association reports that over the next decade, the drone industry in Florida is forecasted to create about 4,800 jobs and more than \$3.8 billion in economic impact. Before the small-drone rule, businesses were required to obtain an exemption from the FAA to fly drones for commercial purposes. An analysis by the Association for Unmanned Vehicle Systems International of the first 5,521 companies to receive permission from the FAA to fly drones commercially found that more than 570 were granted to Florida companies — the second-most in the nation.

The future is bright for drone technology and the companies that are adopting it. Rather than seeking to limit the transformative uses of drones, the Orlando City Council should do all it can to support the growth and development of this industry. Otherwise, Florida, and the Orlando area in particular, risks losing its innovation edge in this burgeoning industry and the billions of dollars it will contribute to the state.

Brian Wynne is president and CEO of the Association for Unmanned Vehicle Systems International.  
<http://www.orlandosentinel.com/opinion/os-ed-orlando-drone-ordinance-010617-20170106-story.html>

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## **Russia Developing Technology To Defend Against Swarming UAVs.**

The [National Interest](#) (1/12) reports that as the US develops swarming UAVs, Russia is working on technology to defend against the systems. United Instrument Manufacturing Corporation CEO Alexander Yakunin told a Russian news agency that “the Russian Army may get weapons against swarms of attack mini-drones in two years.” One option undergoing testing is the Electronic Warfare Development Center’s (EWDC) “Repellant” system, a “mobile platform to destroy or suppress miniature UAVs.”

## **NASA Plans To Purchase Earth Science Data From Smallsat Companies.**

[Space News](#) (1/11, Subscription Publication) reported that on Tuesday, NASA Earth System Science Pathfinder Program Office Deputy Program Director Christina Moats-Xavier said that, following the response to a request for information (RFI) in July, the agency “is ready to move ahead with plans to purchase Earth science data from commercial smallsat companies.” Speaking to the NASA Earth Science Subcommittee, Moats-Xavier said, “The data they are collecting is relevant to our Earth science research goals.” NASA Earth Science Division Director Michael Freilich explained that the goal of the initiative is to explore how their “data can be used without requiring the companies...to make changes to how they produce it.” [Sharing the market with UAVs...](#)

## **LA Sheriff’s Department To Deploy UAV For Various Situations.**

The [Los Angeles Times](#) (1/12) reports that on Thursday, Los Angeles County Sheriff Jim McDonnell announced that the department “will begin deploying” a UAV “to aid deputies responding to arson scenes, suspected bombs and hostage situations, but he promised the device would not be used to surveil residents.” McDonnell said that the “technology can assist us in reducing the impact of risks on personnel.” The department obtained FAA authorization for the UAV, and Capt. Jack Ewell explained that “sheriff’s officials have to notify the FAA anytime the drone is airborne, and provide information about where it will be flying and for what purpose.”

## **NASA Simulates Adding More Rotors To Small UAV.**

[sUAS News \(UK\)](#) (1/12) reports that in findings presented at the 2017 AIAA SciTech Forum in Grapevine, Texas, a NASA researcher revealed how the agency’s Ames Research Center used computer models to simulate the effects of adding four extra rotors to a DJI Phantom 3 quadcopter. “This configuration produced a nearly twofold increase in the amount of thrust,” a finding that offers “new insights into the design of autonomous, heavy-lift, multirotor vehicles for uses such as cargo transportation.”

## **Seattle May Charge Operator In Space Needle UAV Crash.**

[CNN](#) (1/12) reports that the city of Seattle’s attorney’s office said that it “could charge the owner” of the UAV that crashed into the Space Needle on December 31. “The FAA said the incident is under investigation,” CNN reports, adding that “a source close to the investigation confirms authorities identified the owner through the drone’s serial number.” Although the city does not have UAV-specific restrictions, the attorney’s office said that it could charge the operator with reckless endangerment.